

SECRET

15 August 1966

Declass Review, NIMA/DoD

This group of items is disseminated as part of NPIC/R-218/66, Southeast Asia Activity Report, POL Facilities, North Vietnam. Nineteen items are included in this portion of the report, 16 covering additions to the original group and 3 replacing previously disseminated items with more current information based on the most recent photography referenced. These 3 items being updated are as follows:

Hai Phong Petroleum Products Storage, A15, A16, X-A15, X-A16;
Thai Nguyen Petroleum Products PUG South, B1, B2, X-B1; and
Yen Hau Petroleum Products Storage PUG, B21, B22, X-B21.

NPIC plans to disseminate the third and final group of these items, completing the basic report, the week of 22 August 1966. Additional groups of items will be disseminated thereafter as new installations are identified and/or earlier information is revised based upon expansion of the facility as originally reported, later photography, or updated Bomb Damage Assessment information.

DIA review(s)
completed.

DIA HAS NO OBJECTION TO
DECLASSIFICATION AND
RELEASE.

SECRET

25X1C

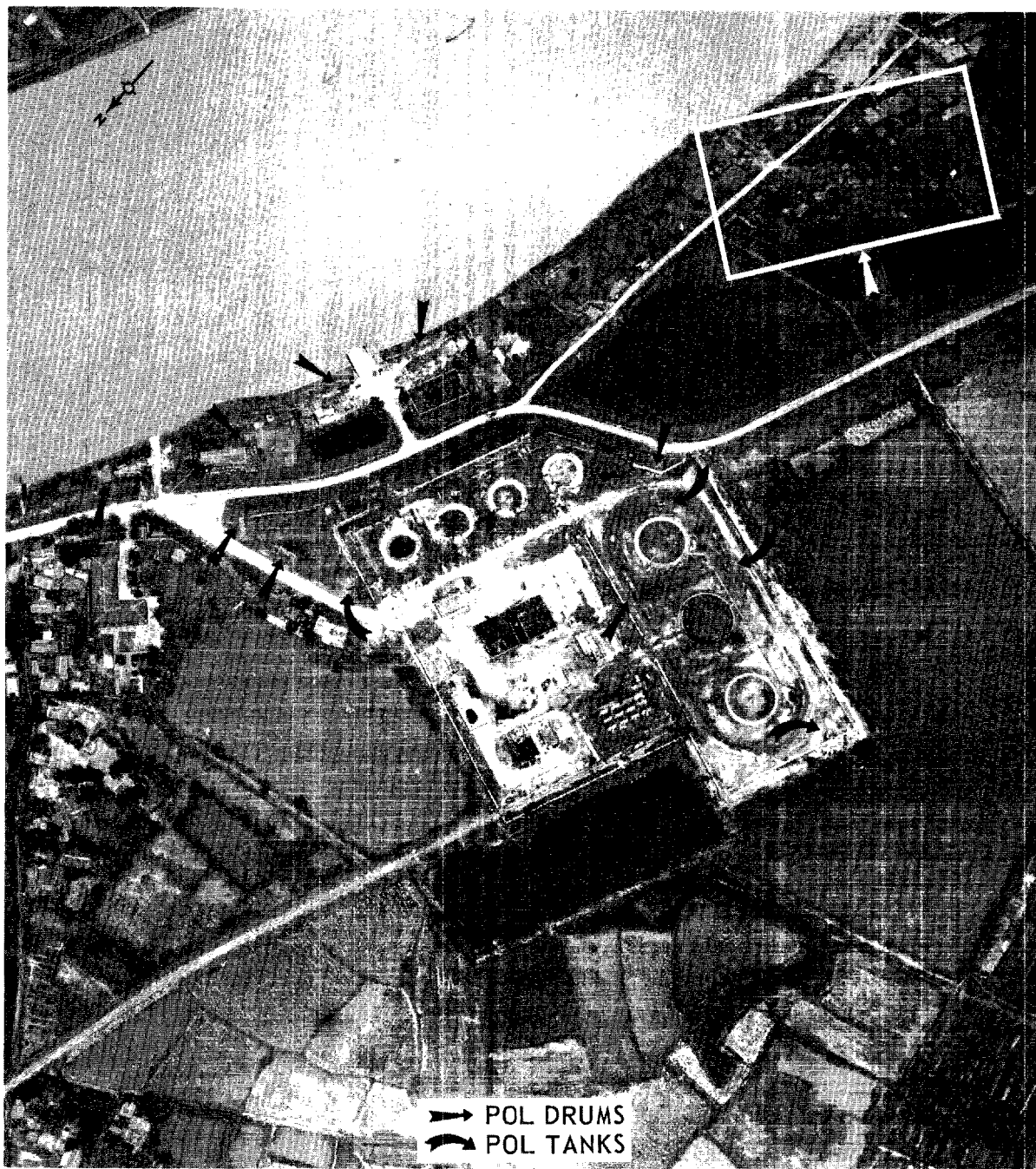
CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

XH228576
UTM COORDINATES

NAM DINH PETROLEUM PRODUCTS STORAGE

2024N 10610E
GEOGRAPHIC COORDINATES



A14

25X1C

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSEM

CONFIDENTIAL

R-218/66

25X1A

BE NUMBER

XJ/30087
 UTM COORDINATES

2052N 10639E
 GEOGRAPHIC COORDINATES

NAME: HAI PHONG PETROLEUM PRODUCTS STORAGE

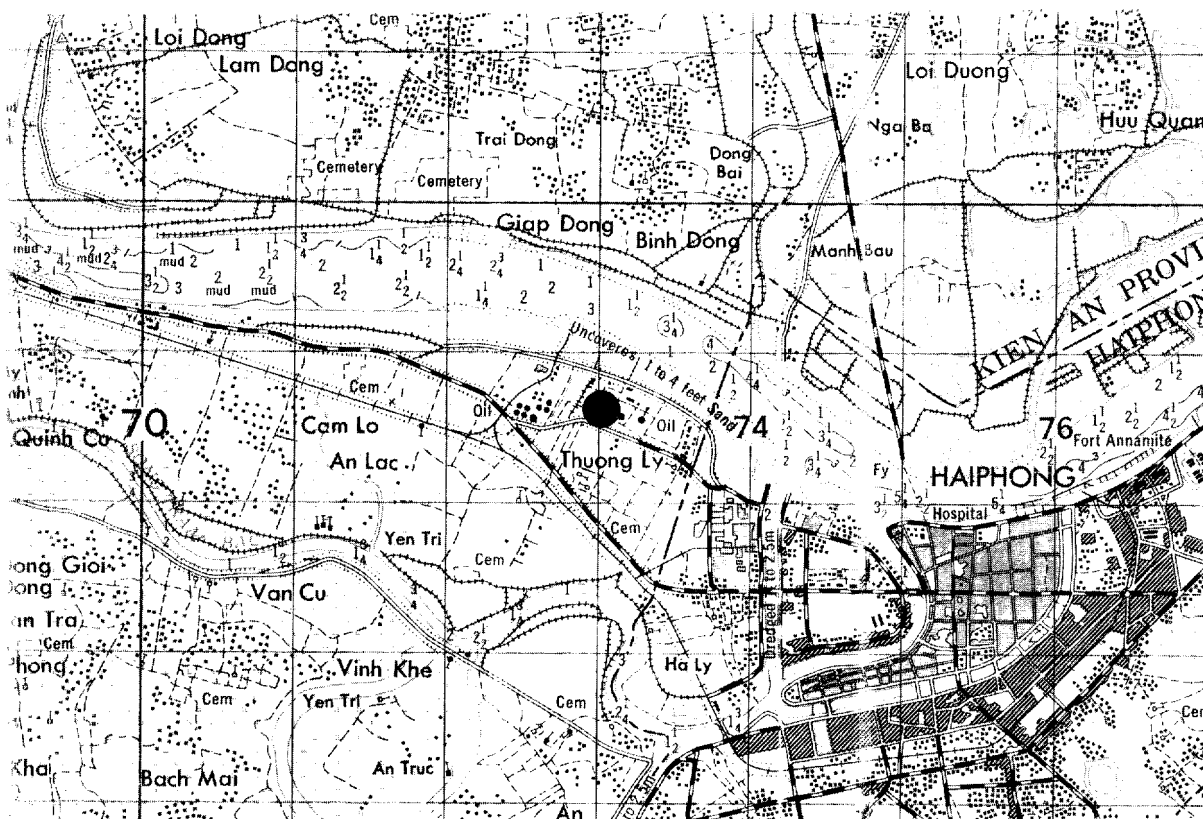
LOCATION: 2 NM WNW OF HAI PHONG

DESCRIPTION: PRIOR TO STRIKE OF 29 JUN 66 FACILITY CONSISTED OF 30 ABOVE-GROUND CYLINDRICAL STORAGE TANKS AND 5 HORIZONTAL TANKS. PHOTOGRAPHY AFTER THE 3D STRIKE REVEALS 27 DESTROYED (5 DESTROYED BY 3D STRIKE) AND 8 DAMAGED TANKS. AT LEAST 15 LARGE AND 4 MEDIUM BURIED TANKS ON SOUTH BANK OF THE CUA CAM BETWEEN MIDDLE AND EASTERN PIERS OF THE FACILITY, WERE UNDAMAGED.
ESTIMATED CAPACITY: RESIDUAL TANK CAPACITY 4,257 MT (423 MT IN BURIED TANKS)

MAP REFERENCES: AMS SERIES L701, SHEET 6373-IV, 3D ED, JAN 61 (U)
 AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



A15

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSEM

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL
NO FOREIGN DISSEM

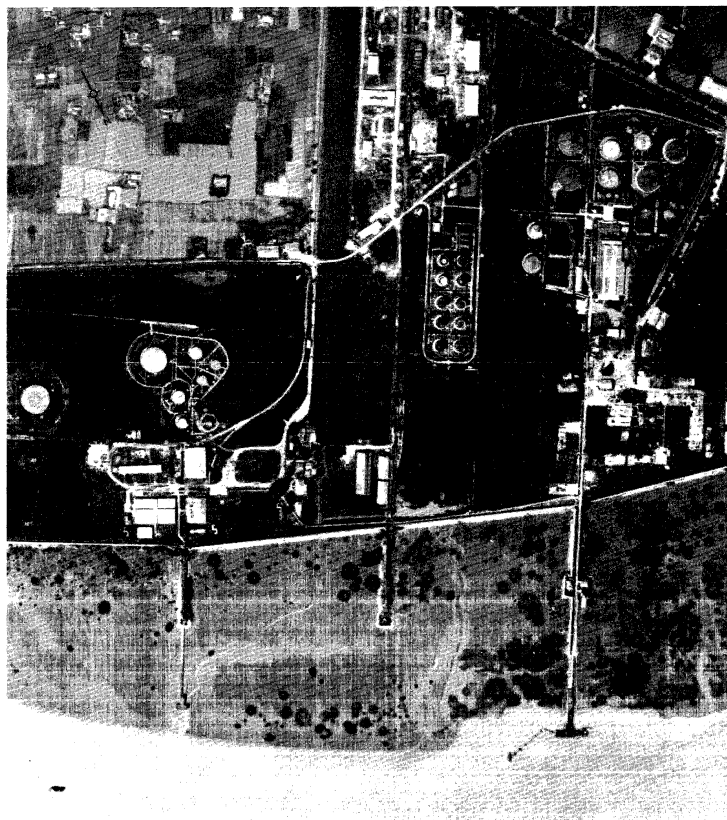
R-218/66

XJ730087
UTM COORDINATES

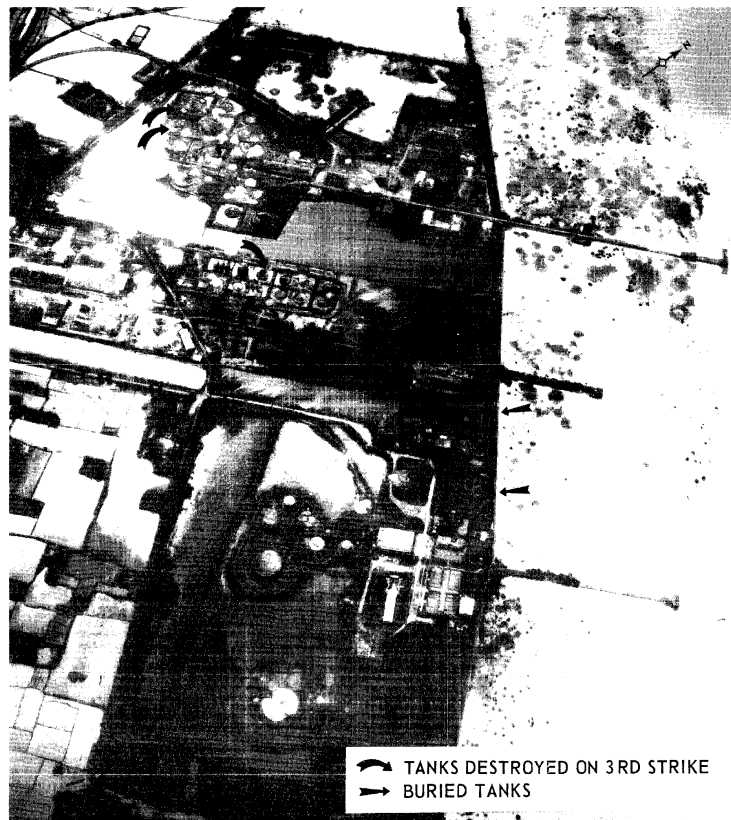
HAI PHONG PETROLEUM PRODUCTS STORAGE

2052N 10639E
GEOGRAPHIC COORDINATES

PRE-STRIKE



POST-STRIKE



A16

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL
NO FOREIGN DISSEM [redacted]

14-218764

25X1A

[redacted]	XJ572260	210111 10630E
BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES

NAME: DUONG NHAM PETROLEUM PRODUCTS STORAGE UNDERGROUND

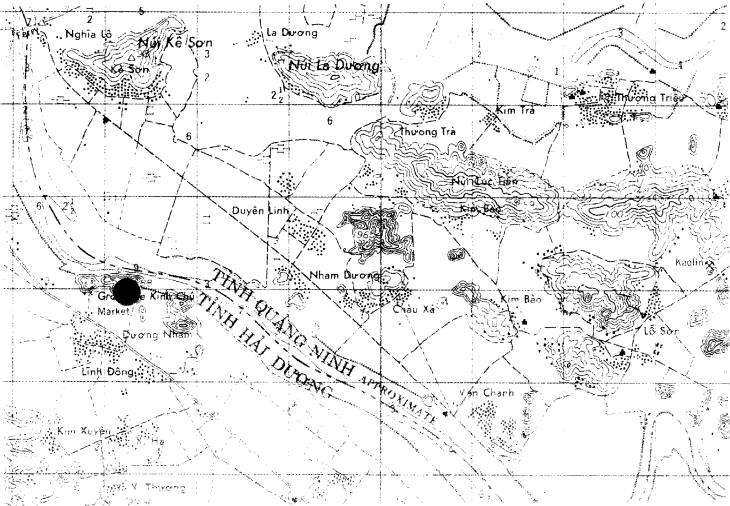
LOCATION: 0.4 NM NORTH OF DUONG NHAM AND 14.5 NM NW OF HAI PHONG

DESCRIPTION: AREA CONTAINS 4 VERTICAL ABOVEGROUND POL STORAGE TANKS, EACH WITH A U-SHAPED PROTECTION WALL AND LOCATED AT THE BASE OF A KARST HILL, AND 3 PROBABLE TANK BASES.

ESTIMATED CAPACITY: TANK 4,920 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6374-III, 1ST ED, APP 65 (U)
AMS SERIES JOG(C) 1501, SHEET NE 48-12, 3D ED, JUN 65 (U)

PHOTO REFERENCE: [redacted] 25X1D



CONFIDENTIAL

R-218/66

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1C

TABLE OF CONTENTS CATEGORY B

25X1A

<u>Installation Name</u>	<u>Page Nos.</u>
Thai Nguyen Petroleum Products PUG South	B1, B2
Van Lung Petroleum Products Storage UG	B3, B4
Van Lung Petroleum Products Storage West UG	B5, B6
Hoang Mai POL Storage Area	B7, B8
Ha Noi Petroleum Products Thi Cam	B9, B10
Bai Thuong Petroleum Products Storage UG Southeast	B11, B12
Son La Petroleum Products Storage	B13, B14
Thuong Thon Petroleum Products Storage UG	B15, B16
Ngoc Son Petroleum Products Storage PUG	B17, B18
Thai Lai Petroleum Products Storage	B19, B20
Yen Hau Petroleum Products Storage PUG	B21, B22
Thanh Lang Petroleum Products Storage PUG	B23, B24
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 1)	B25, B26
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 2)	B27, B28
Bang So Petroleum Products Storage PUG	B29, B30
Son Chau Petroleum Products Storage PUG	B31, B32
Kep Petroleum Products Storage	B33, B34
Ha Noi Petroleum Products Storage Duc Noi (Area 1)	B35, B36
Ha Noi Petroleum Products Storage Duc Noi (Area 2)	B37, B38
Ha Noi Petroleum Products Storage Duc Noi (Area 3)	B39, B40
Ha Noi Petroleum Products Storage Duc Noi (Area 4)	B41, B42
Cu Van Petroleum Products Storage	B43, B44
Cu Van Petroleum Products Storage East UG	B45, B46
Dao Quan Petroleum Products Storage East	B47, B48
Dao Quan Petroleum Products Storage West	B49, B50
Nam Dinh Petroleum Products Storage PUG	B51, B52
Tung Tu Petroleum Products Storage UG	B53, B54
Phuc Yen Airfield POL Storage Area 1	B55, B56
Phuc Yen Airfield POL Storage Area 2	B57, B58
Xom Duong Quan Petroleum Products Storage UG East	B59, B60
Xom Duong Quan Petroleum Products Storage UG	B61, B62
Nui Tap Tinh POL Storage Area	B63, B64
Sac Le POL Storage Area	B65, B66
Phu Dong POL Storage Area	B67, B68
Thuan Le POL Storage Area	B69, B70
My Duc POL Storage Area	B71, B72
Thanh Hoa POL Storage Area	B73, B74
Ba Don POL Storage Area	B75, B76
Phuc Loi Petroleum Products Storage Navy	B77, B78

25X1A

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

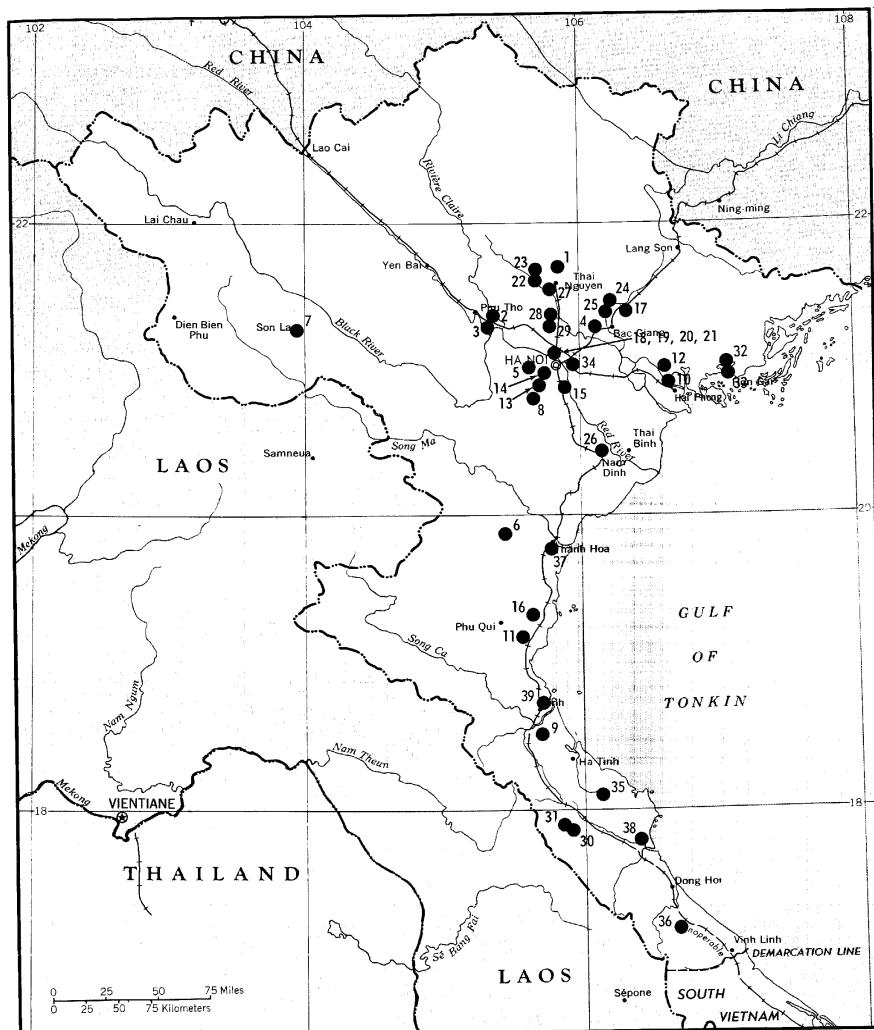
CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

R-218/66

CONFIDENTIAL

NO FOREIGN DISSEM



**KEY TO CATEGORY B
DISPERSED STORAGE AREAS**

1. Thai Nguyen Petroleum Products PUG South
2. Van Lung Petroleum Products Storage UG
3. Van Lung Petroleum Products Storage West UG
4. Hoang Mai POL Storage Area
5. Ha Noi Petroleum Products Thi Cam
6. Bai Thuong Petroleum Products Storage UG Southeast
7. Son La Petroleum Products Storage
8. Thuong Thon Petroleum Products Storage UG
9. Ngoc Son Petroleum Products Storage PUG
10. Thai Lai Petroleum Products Storage
11. Yen Hau Petroleum Products Storage PUG
12. Thanh Lang Petroleum Products Storage PUG
13. Ha Noi Petroleum Products Storage UG Thanh Liet (Area 1)
14. Ha Noi Petroleum Products Storage UG Thanh Liet (Area 2)
15. Bang So Petroleum Products Storage PUG
16. Son Chau Petroleum Products Storage PUG
17. Kep Petroleum Products Storage
18. Ha Noi Petroleum Products Storage Duc Noi (Area 1)
19. Ha Noi Petroleum Products Storage Duc Noi (Area 2)
20. Ha Noi Petroleum Products Storage Duc Noi (Area 3)
21. Ha Noi Petroleum Products Storage Duc Noi (Area 4)
22. Cu Van Petroleum Products Storage
23. Cu Van Petroleum Products Storage East UG
24. Dao Quan Petroleum Products Storage East
25. Dao Quan Petroleum Products Storage West
26. Nam Dinh Petroleum Products Storage PUG
27. Tung Tu Petroleum Products Storage UG
28. Phuc Yen Airfield POL Storage Area 1
29. Phuc Yen Airfield POL Storage Area 2
30. Xom Duong Quan Petroleum Products Storage UG East
31. Xom Duong Quan Petroleum Products Storage UG
32. Nui Tap Tinh POL Storage Area
33. Sac Le POL Storage Area
34. Phu Dong POL Storage Area
35. Thuan Le POL Storage Area
36. My Duc POL Storage Area
37. Thanh Hoa POL Storage Area
38. Ba Don POL Storage Area
39. Phuc Loi Petroleum Products Storage Navy

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

NO FOREIGN DISSEM

25X1C

R-218/66

25X1A

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
	WJ877956	2139N 10550E

NAME: THAI NGUYEN PETROLEUM PRODUCTS PUG SOUTH

LOCATION: 4.1 NM NORTH OF THAI NGUYEN AND 0.8 NM EAST OF VAN HAO

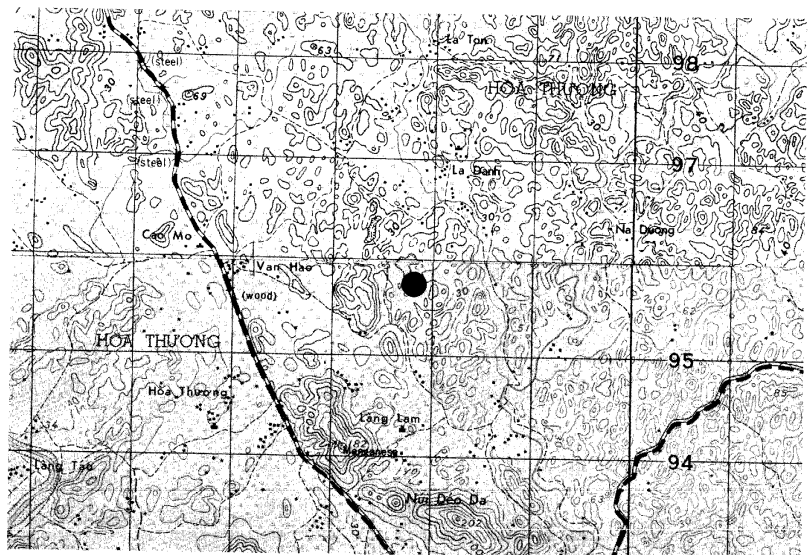
DESCRIPTION: STORAGE AREA CONSISTS OF 2 ADJACENT SITES. EAST AREA CONTAINS APPROXIMATELY 116 BUNKERED TANKS, 6 UNBURIED MEDIUM TANKS, 15 EXCAVATIONS, AND APPROXIMATELY 4,000 DRUMS DISPERSED UNDER TREES. WEST AREA, 0.3 NM WEST, CONTAINS AT LEAST 475 DRUMS IN OPEN STORAGE AND IN 9 EXCAVATIONS AND 9 ADDITIONAL EXCAVATIONS. BOMB CRATERS ARE OBSERVED IN EACH AREA.

ESTIMATED CAPACITY: TANK 1,464 MT DRUM 895 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6175-I, 1ST ED, OCT 63 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



25X1C

B1

CONFIDENTIAL

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

P-218/66

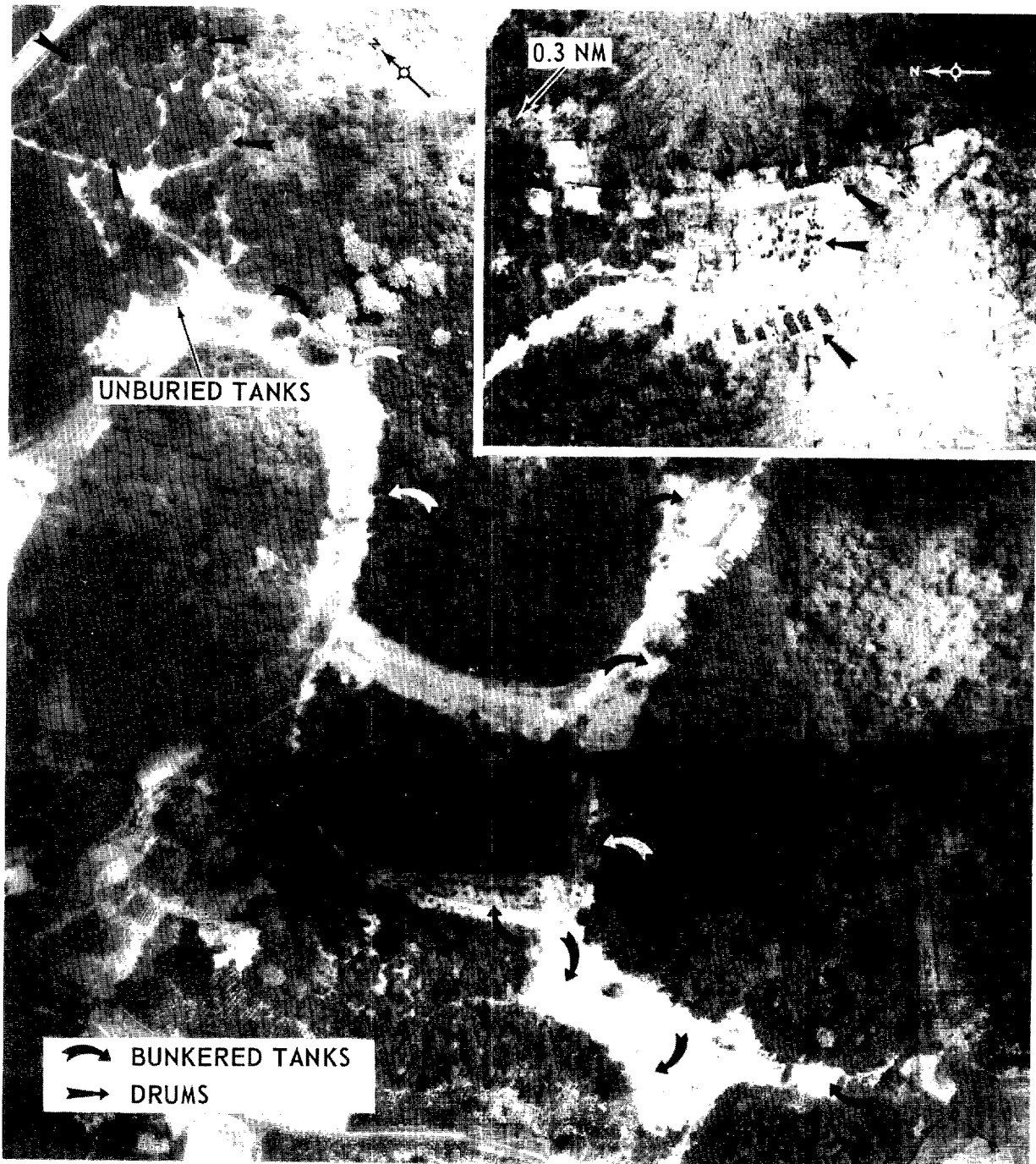
THAI NGUYEN PETROLEUM PRODUCTS PUG SOUTH

WJ877956

UTM COORDINATES

2139N 10550E

GEOGRAPHIC COORDINATES



25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSE

25X1C

2-218/66

25X1A

UTM COORDINATES

2120N 10522E
GEOGRAPHIC COORDINATES

NAME: VAN LUNG PETROLEUM PRODUCTS STORAGE UG

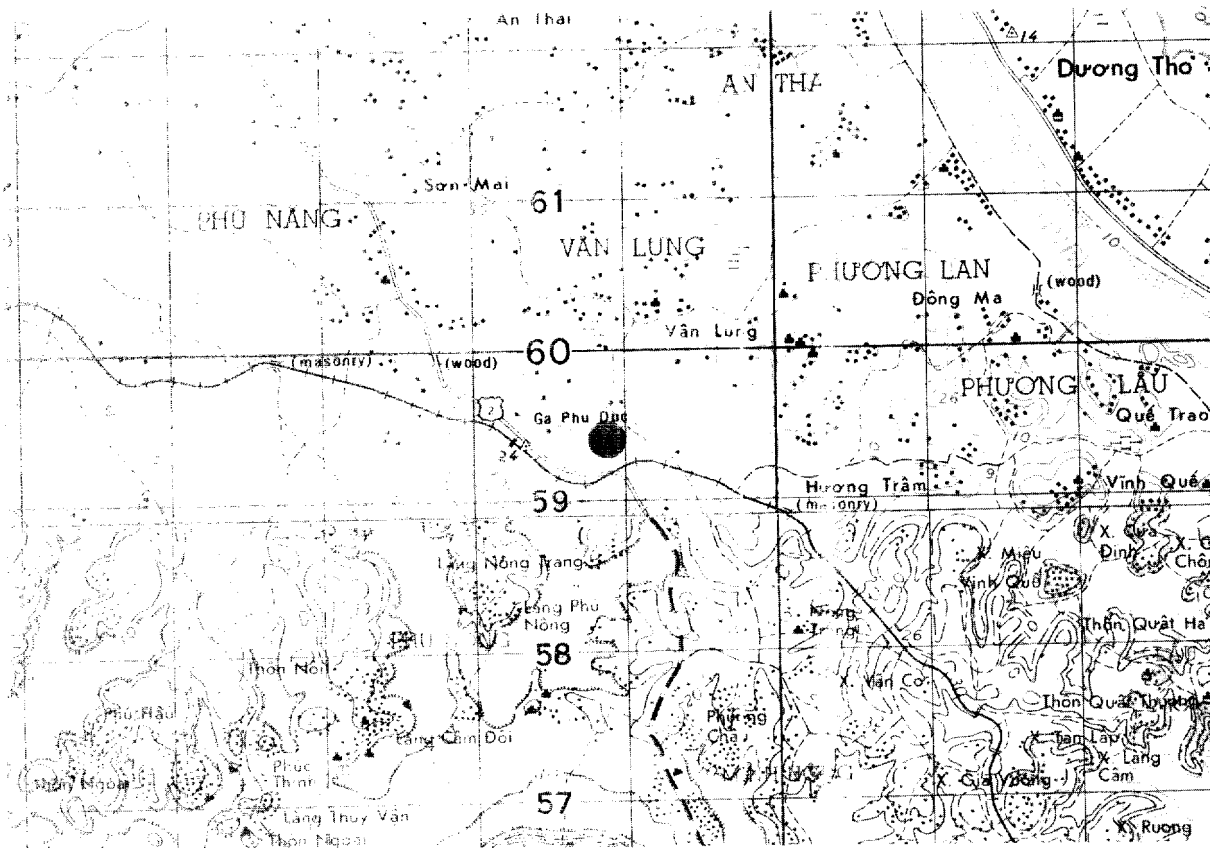
LOCATION: 0.5 NM SSW OF VAN LUNG AND 0.1 NM NORTH OF ROUTE 2 AND THE
HA NOI/LAO CAI RAIL LINE

DESCRIPTION: STORAGE SITE CONSISTS OF AT LEAST 28 BURIED POL TANKS AND APPROXIMATELY 80 POL DRUMS IN OPEN STORAGE WITHIN A LOOP ROAD. SITE IS CONNECTED TO ROUTE 2 BY A SECONDARY ROAD.

ESTIMATED CAPACITY: TANK 336 MT DRUM 16 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6075-11, 1ST ED, JAN 64 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE: 25X1D



Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

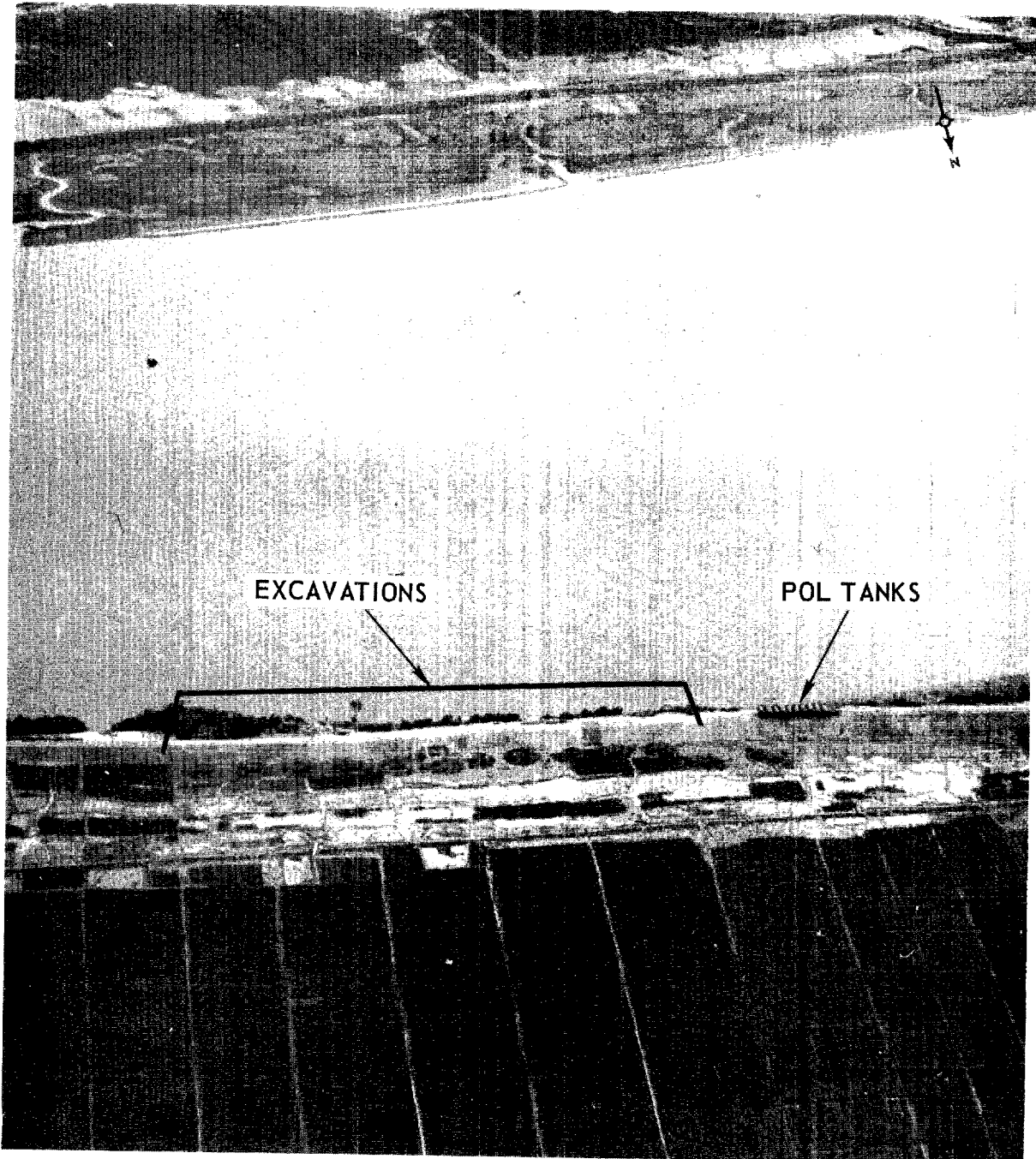
25X1C

THAI LAI PETROLEUM PRODUCTS STORAGE

R-218/66

XJ684143
UTM COORDINATES

2055N 10637E
GEOGRAPHIC COORDINATES



25X1C

B20

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
CONFIDENTIAL
NO FOREIGN DISSEM

R-218/66

25X1A

RE NUMBER

WG593166
UTM COORDINATES

1908N 10534E
GEOGRAPHIC COORDINATES

NAME: YEN HAU PETROLEUM PRODUCTS STORAGE PUG

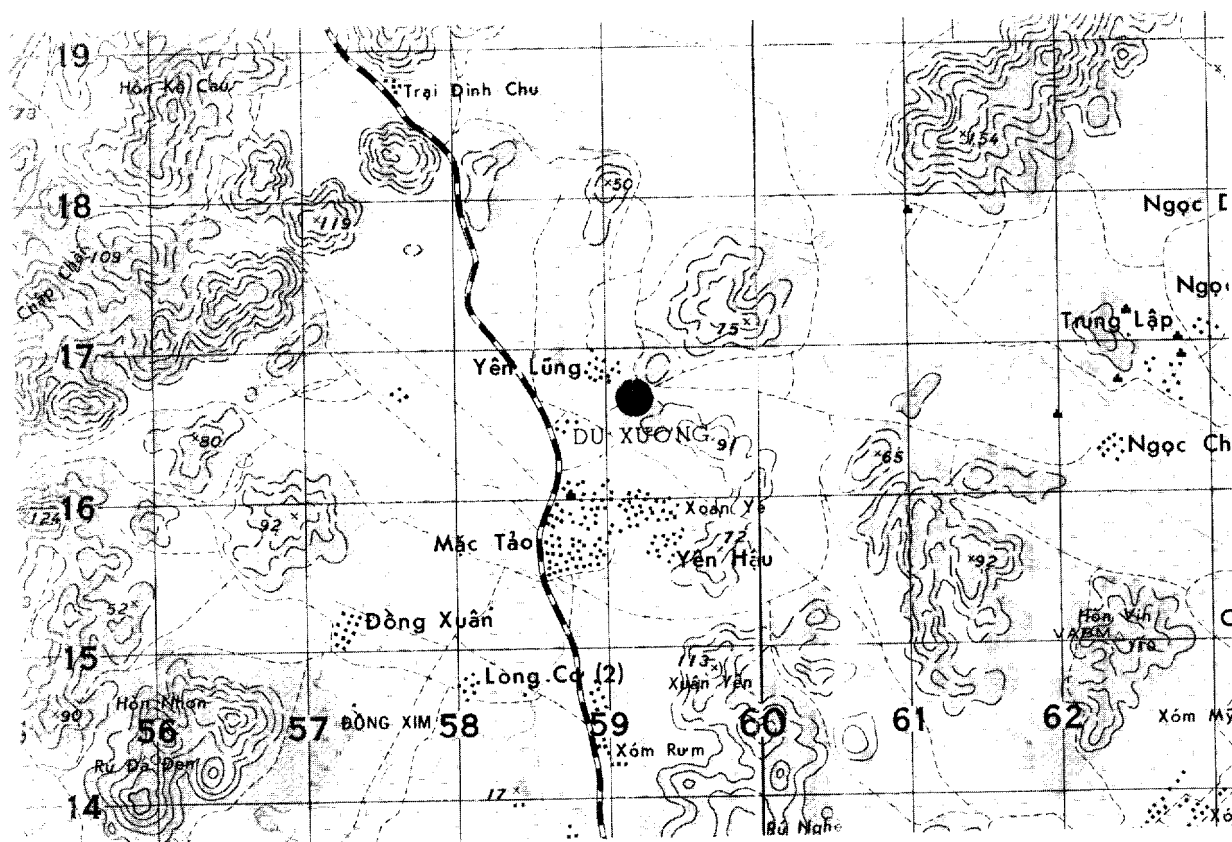
LOCATION: 0.5 NM NNW OF YEN HAU AND 0.3 NM EAST OF ROUTE 116

DESCRIPTION: PRIOR TO STRIKE AREA CONSISTED OF 50 BURIED TANKS, 20 OPEN EXCAVATIONS, AND APPROXIMATELY 2,000 DRUMS SCATTERED ALONG LOOP ROADS. POST-STRIKE PHOTOGRAPHY REVEALS AT LEAST 30 UNDAMAGED BURIED TANKS. MAJOR BOMB DAMAGE APPEARS TO BE IN AREA OF UNOCCUPIED EXCAVATIONS AND IN DRUM STORAGE AREA. ALL 2,000 DRUMS APPEAR TO HAVE BEEN DESTROYED.
ESTIMATED CAPACITY: POST-STRIKE TANK 360 M

MAP REFERENCES: AMS SERIES L701, SHEET 6168 III, 1ST ED, NOV 62 (U)
AMS SERIES 1501, SHEET NE 48-3, 1ST ED, DEC 65 (U)

PHOTO REFERENCE:

25X1D



R-218/66

WG593166
UTM COORDINATES

YEN HAU PETROLEUM PRODUCTS STORAGE PUG
1908N 10534E
GEOGRAPHIC COORDINATES



25X1C

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

R-218/66

25X1A

BE NUMBER

XJ676195
UTM COORDINATES2058N 10636E
GEOGRAPHIC COORDINATES

NAME: THANH LANG PETROLEUM PRODUCTS STORAGE PUG

LOCATION: 0.3 NM NNE OF THANH LANG AND 8 NM NW OF HAI PHONG

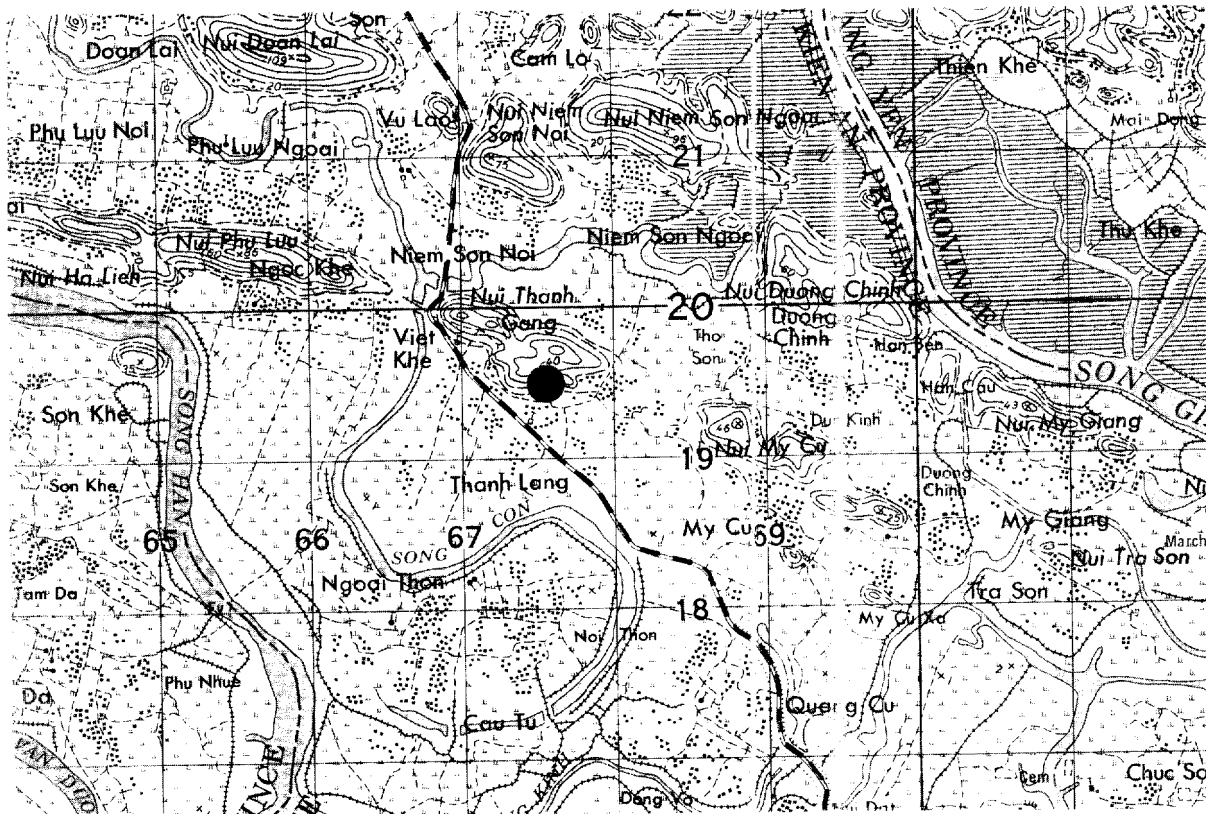
DESCRIPTION: STORAGE AREA CONTAINS 32 BURIED TANKS SLIGHTLY OVERGROWN WITH VEGETATION, 5 UNBURIED TANKS, AND APPROXIMATELY 3,000 DRUMS.

ESTIMATED CAPACITY: TANK 444 MT DRUM 600 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6373-IV, 3D ED, JAN 61 (U)
AMS SERIES JOG(G) 1501, SHEET NF 43-16, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



b23

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

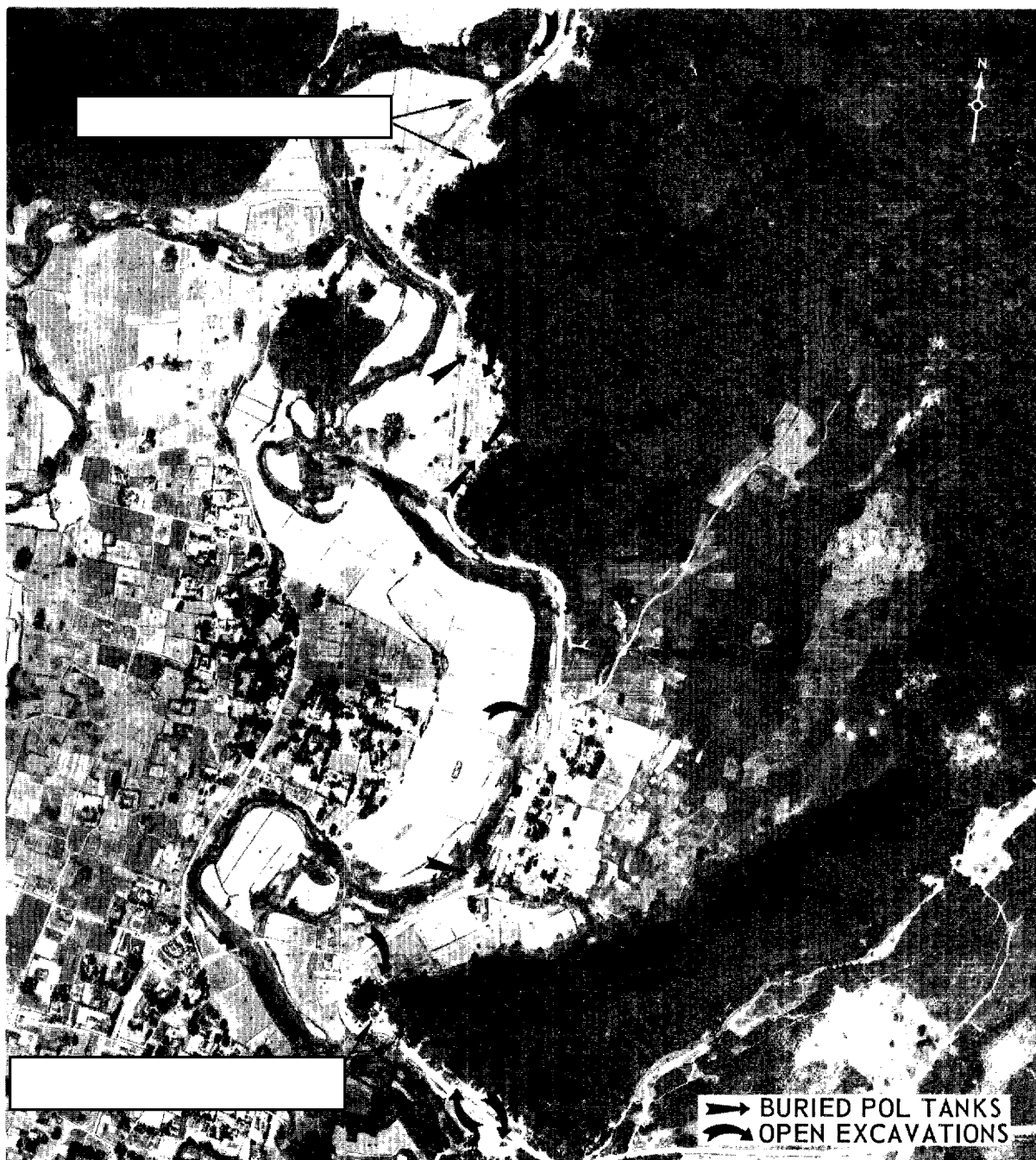
NO FOREIGN DISSEM

CONFIDENTIAL

R-218/66

WE895768
UTM COORDINATES

1752N 10550E
GEOGRAPHIC COORDINATES



B62

25X1C

00000000

25X1A

25X1A

[REDACTED]

BE NUMBER

[REDACTED]

UTM COORDINATES

21050 100480

GEOGRAPHIC COORDINATES

NAME: NUI TAP FINH POL STORAGE AREA

LOCATION: 1.5 NM NORTH OF NUI TAP FINH AND 1.7 NM E OF THE UONG BI
THERMAL POWERPLANT

DESCRIPTION: AREA CONTAINS 12 EXCAVATIONS, 2 CONTAINING 1 HORIZONTAL TANK
EACH AND 3 MORE CONTAINING A TOTAL OF AT LEAST 13 P-E DRUMS. THE REMAINING
EXCAVATIONS ARE EMPTY.

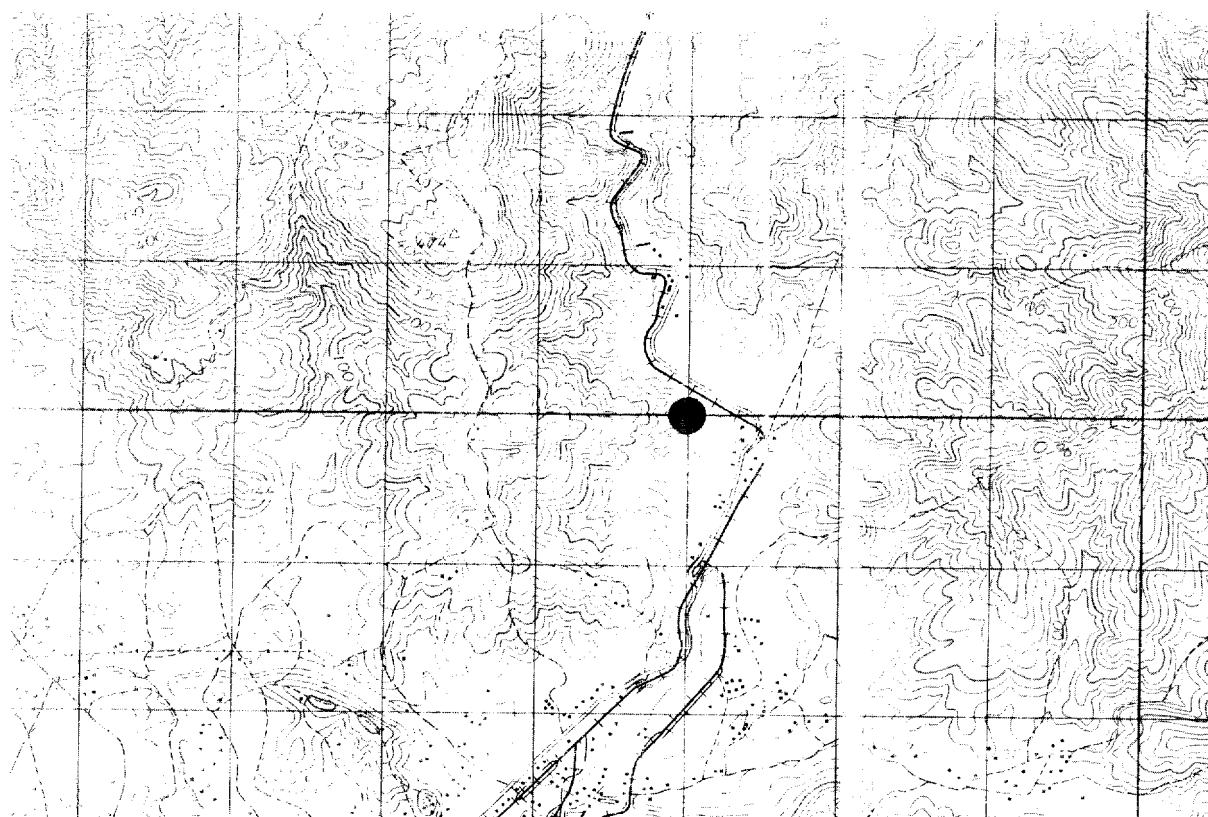
ESTIMATED CAPACITY: TANK 24 MT DRUM 216 MT

MAP REFERENCES: AMS SERIES L7014, SHEET 6351 II, 1ST ED, 1965 (U)
AMS SERIES JOG(G), 1501, SHEET NF 8-12, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

[REDACTED]

25X1D



00000000

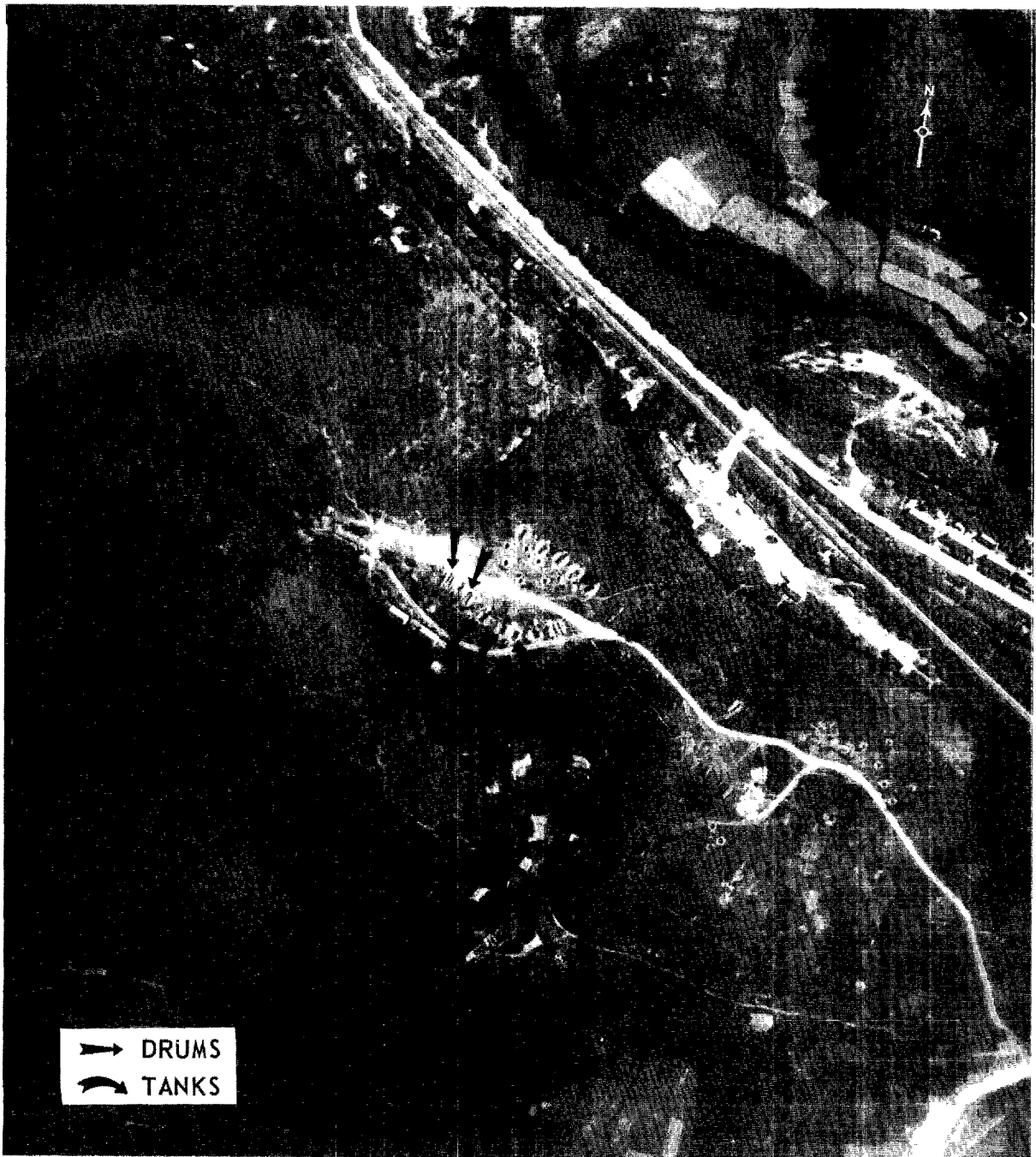
CONFIDENTIAL

R-218/66

NUI TAP TINH POL STORAGE AREA

XJ870300
UTM COORDINATES

2103N 10648E
GEOGRAPHIC COORDINATES



B64

CONFIDENTIAL

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1A

IS ENEMPIER

UTM COORDINATES

2057N 10708E

GEOGRAPHIC COORDINATES

NAME: SAC LE POL STORAGE AREA

LOCATION: 0.9 NM WNW OF SAC LE AND 3.1 NM NE OF HON GAI

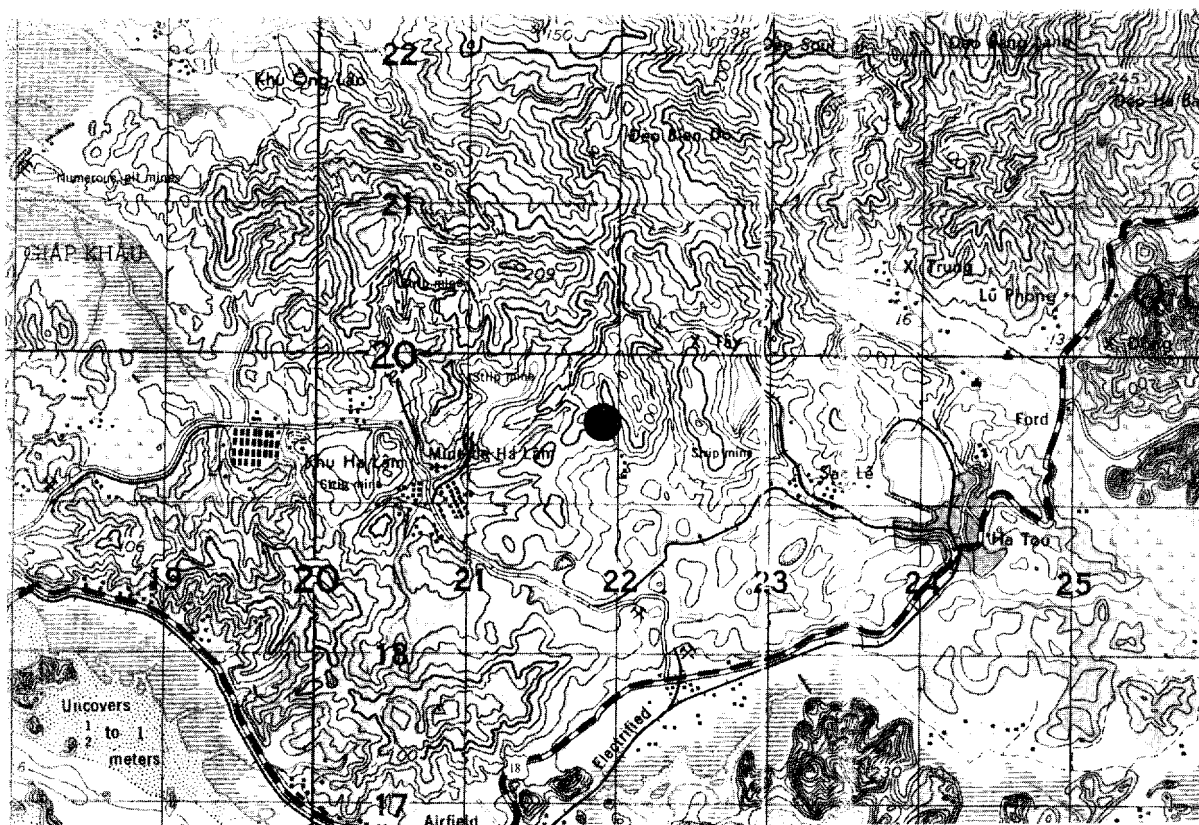
DESCRIPTION: AREA CONTAINS 14 BURIED POL TANKS AND E-CAVATIONS FOR AN ADDITIONAL 5 TANKS.

ESTIMATED CAPACITY: TANK 168 MT

MAP REFERENCES: AMS SERIES 1701, SHEET 6473 IV, 1ST ED, APR 63 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

25X1C

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

YJ219195
UTM COORDINATES

SAC LE POL STORAGE AREA

2057N 10708E
GEOGRAPHIC COORDINATES



BURIED POL TANKS

25X1C

B66
CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

8-218/66

25X1A

25X1A

BE NUMBER

UTM COORDINATES

2103N 10556E
GEOGRAPHIC COORDINATES

NAME: PHU DONG POL STORAGE AREA

LOCATION: 1.6 NM WNW OF PHU DONG AND 5.6 NM NE OF HA NOI, ON EAST BANK OF CANAL DES RAPIDES

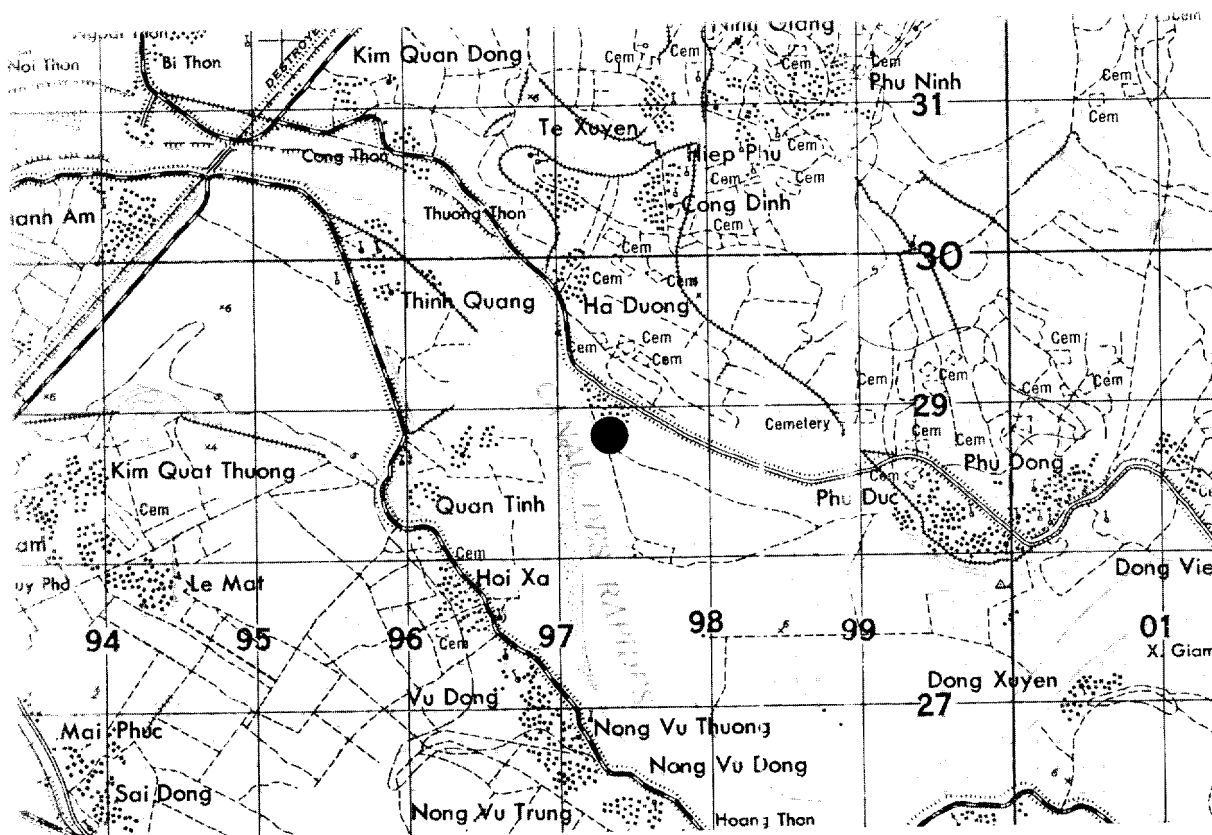
DESCRIPTION: FACILITY CONTAINS 35 MEDIUM BUNKERED TANKS IN A SEMI-CIRCULAR PATTERN.

ESTIMATED CAPACITY: TANK 420 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6174-II, 3D ED, MAY 65 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



667

25X1C

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

D-218/66

25X1A

PHU DONG POL STORAGE AREA

2103N 10556E

UTM COORDINATES

GEOGRAPHIC COORDINATES



25X1C

B68

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

CONFIDENTIAL

R-218/66

25X1A

[REDACTED]

BE NUMBER

XF143133

UTM COORDINATES

1812N 10604E

GEOGRAPHIC COORDINATES

NAME: THUAN LE POL STORAGE AREA

LOCATION: 0.3 NM SSE OF THUAN LE AND 0.6 NM SOUTH OF ROUTE 1A

DESCRIPTION: SITE CONTAINS 2 AREAS WITH A TOTAL OF 40 BURIED MEDIUM TANKS. SOUTH AREA CONSISTS OF 4 ROWS OF 5 BURIED TANKS EACH; NORTH AREA CONTAINS 20 BURIED TANKS IN A SINGLE ROW.

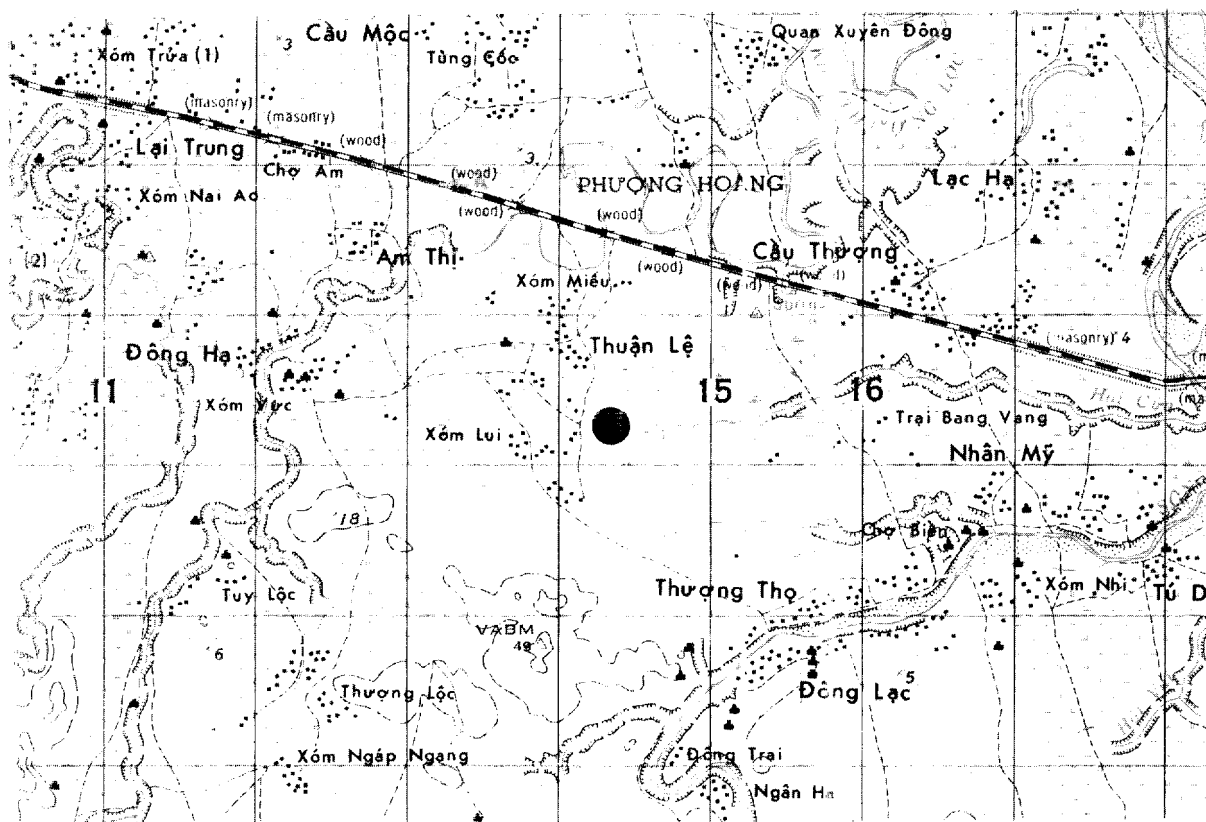
ESTIMATED CAPACITY: TANK 480 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6265-IV, 1ST ED, NOV 62 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-7, JUN 65 (U)

PHOTO REFERENCE:

[REDACTED]

25X1D



BB9

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

NO FOREIGN DISSEM

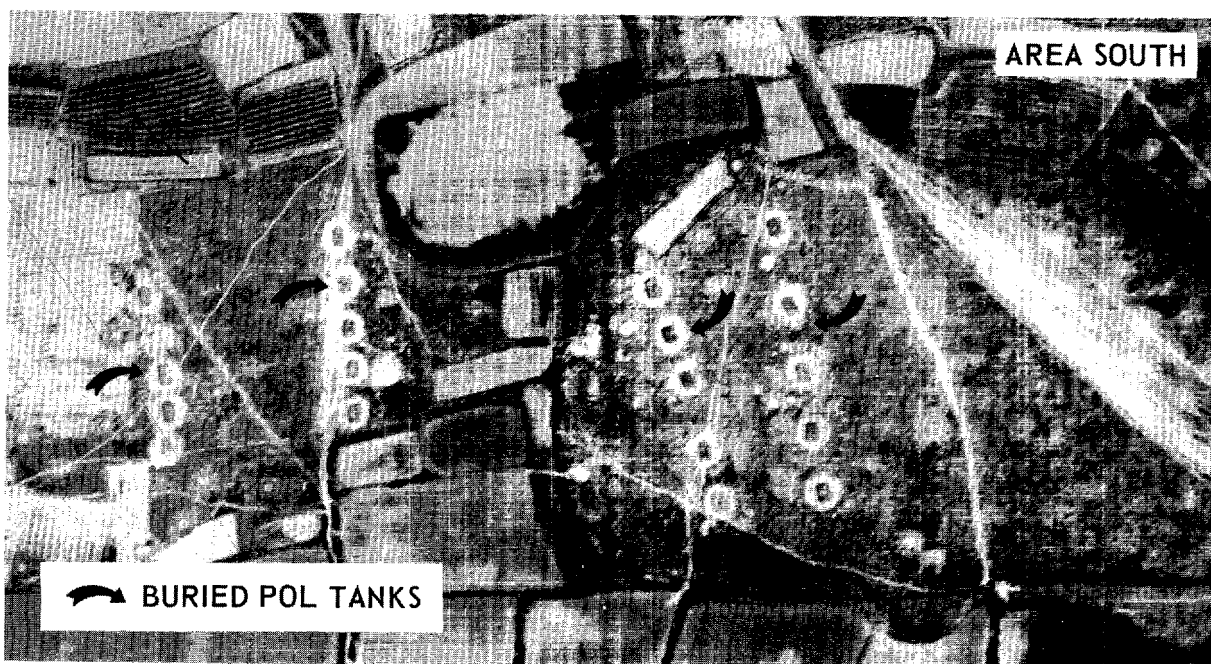
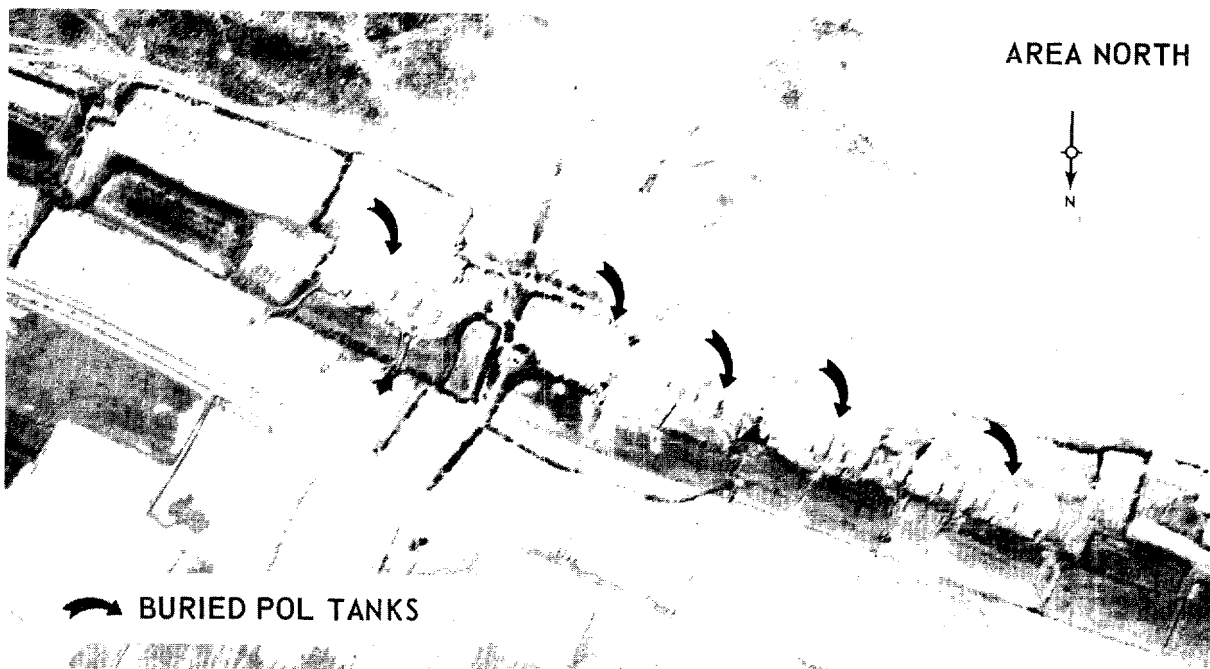
[REDACTED]

R-218/66

THUAN LE POL STORAGE AREA

XF143133
UTM COORDINATES

1812N 10604E
GEOGRAPHIC COORDINATES



25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM [REDACTED]

R-218/66

25X1A

25X1A

[REDACTED]
BE NUMBER

XE763071
UTM COORDINATES

1714N 10639E
GEOGRAPHIC COORDINATES

NAME: MY DUC POL STORAGE AREA

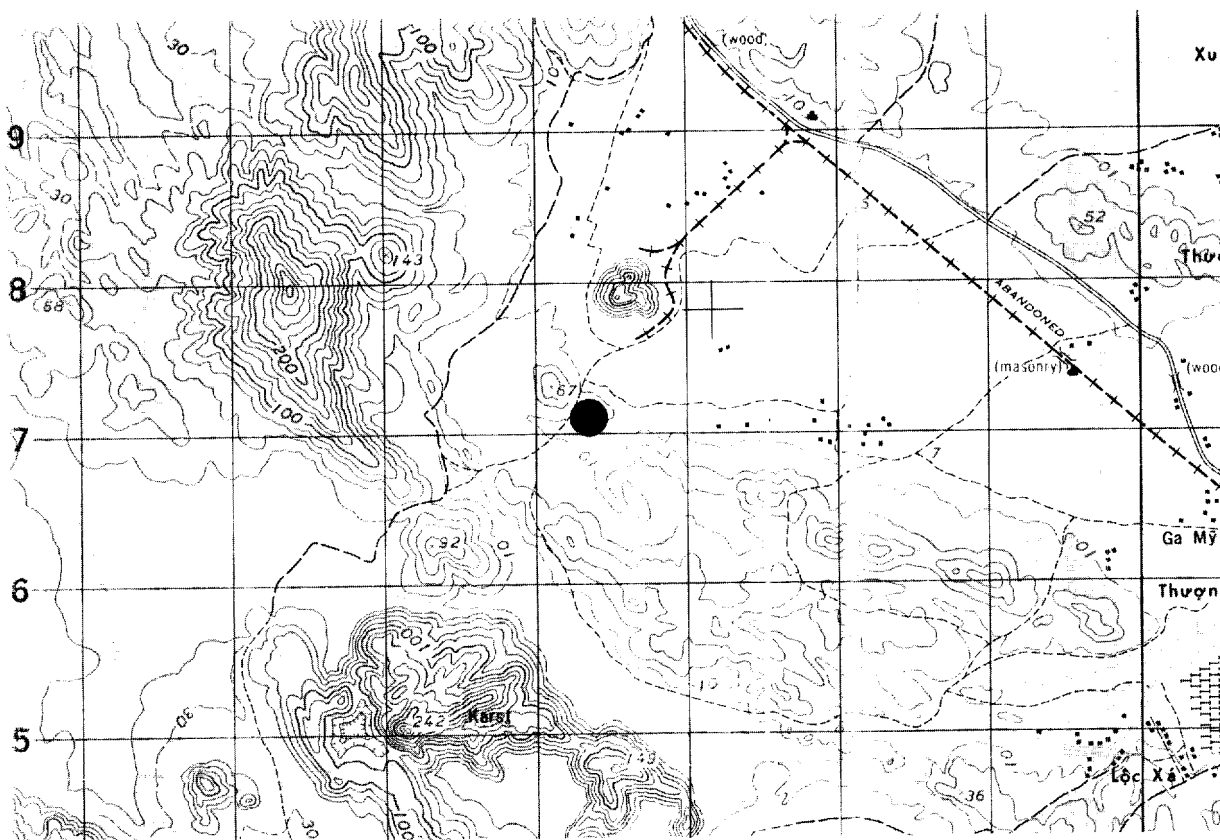
LOCATION: 3 NM WNW OF MY DUC AND 2.1 NM WEST OF ROUTE 101

DESCRIPTION: SITE, CONTAINS 1 ROW OF 10 BUNKERED MEDIUM TANKS. BUNKERS
APPEAR TO BE NEWLY CONSTRUCTED AND HAVE NO OVERGROWTH.

ESTIMATED CAPACITY: TANK 120 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6362 IV, 1ST ED, APR 63 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-12, JUN 65 (U)

PHOTO REFERENCE: 2 [REDACTED] 25X1D



25X1C

CONFIDENTIAL

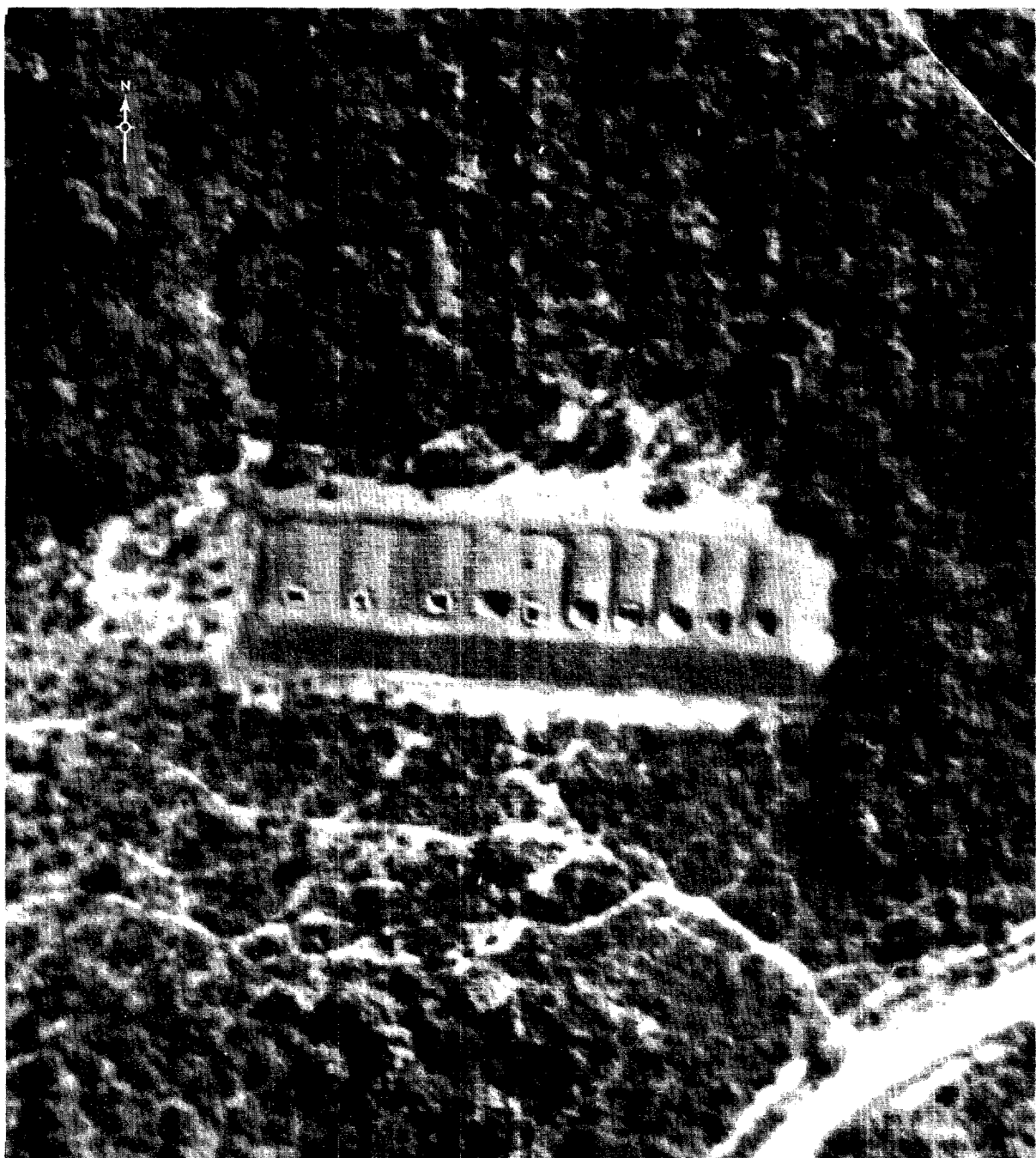
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM [REDACTED]

R-218/66

MY DUC POL STORAGE AREA

XE763071
UTM COORDINATES

1714N 10639E
GEOGRAPHIC COORDINATES



B72

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM [REDACTED]

25X1C

R-218/66

25X1A

0617-
BE NUMBER

UTM COORDINATES

1947N 10547E
GEOGRAPHIC COORDINATES

NAME: THANH HOA POL STORAGE AREA

LOCATION: AT ABANDONED THANH HOA AIRFIELD, 1.3 NM SE OF THANH HOA

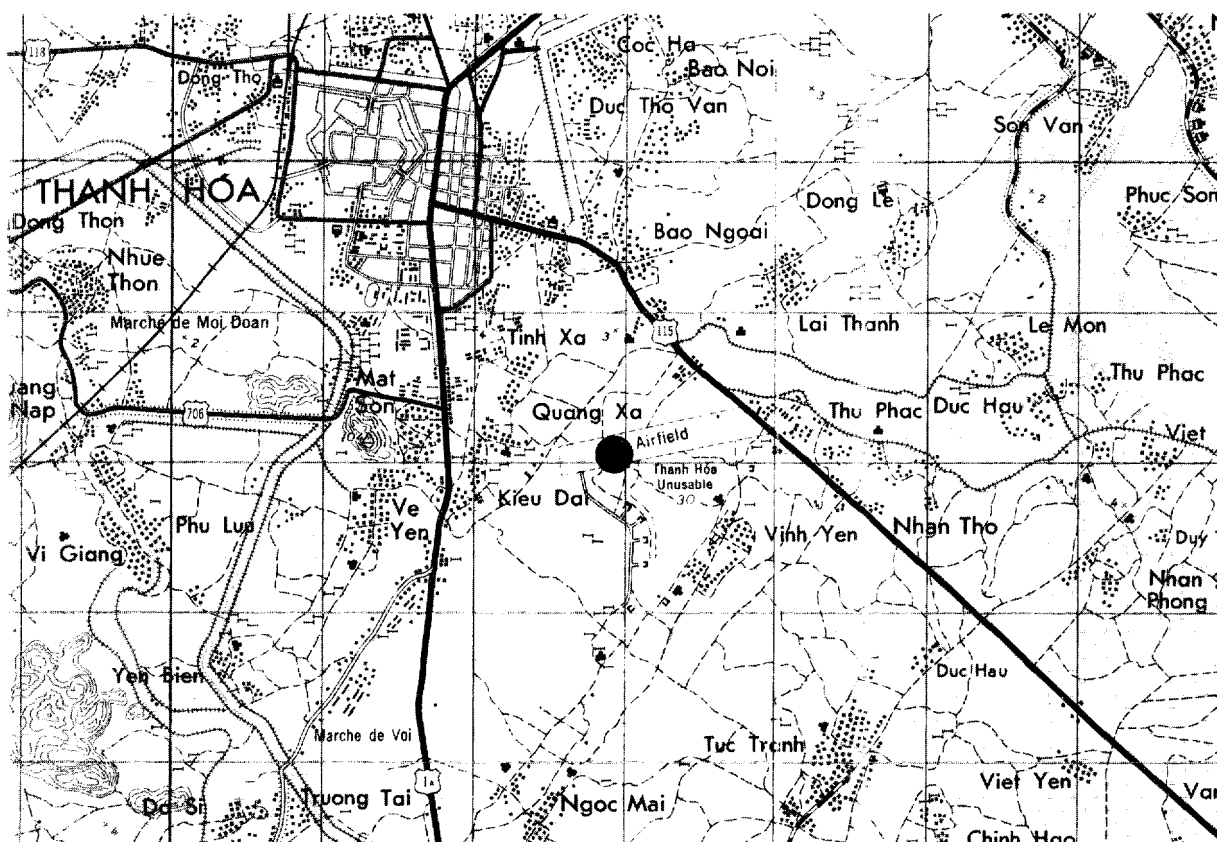
DESCRIPTION: AREA CONTAINS 1 LARGE, 5 MEDIUM, AND 3 SMALL TANKS IN EXCAVATIONS, 1 UNBURIED MEDIUM TANK, AND 3 LARGE AND 1 MEDIUM UNOCCUPIED EXCAVATION.

ESTIMATED CAPACITY: TANK 118 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6170-II, 3D ED, AUG 55 (U)
AMS SERIES JOG(G) 1501, SHEET NE 43-3, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



25X1C

R-218/66

WG829881
UTM COORDINATES

THANH HOA POL STORAGE AREA

1947N 10547E
GEOGRAPHIC COORDINATES



CONFIDENTIAL

R-218/66

0617-
BE NUMBER

XE526634
UTM COORDINATES

1745N 10626E
GEOGRAPHIC COORDINATES

NAME: BA DON POL STORAGE AREA

LOCATION: 0.8 NM EAST OF BA DON AND IMMEDIATELY NORTH OF ROUTE 110

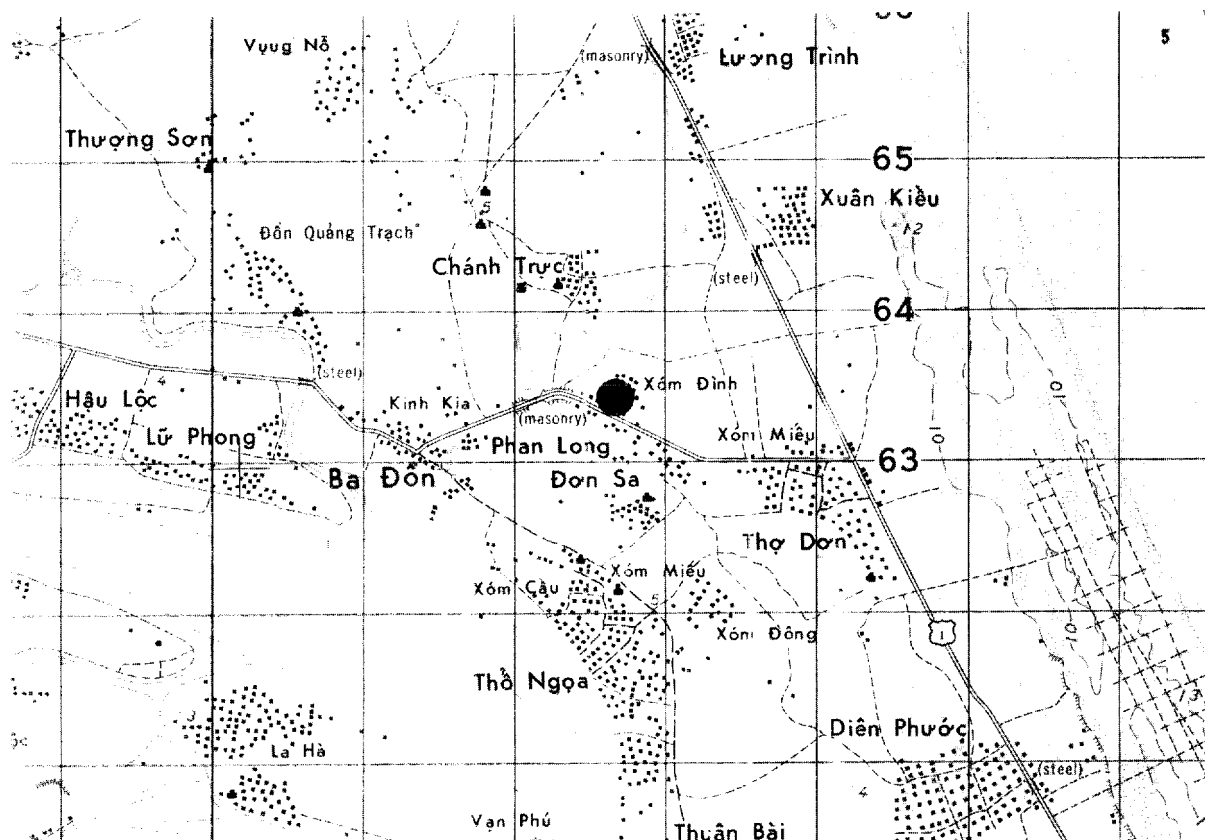
DESCRIPTION: AREA CONTAINS 16 BUNKERED TANKS AND APPROXIMATELY 1,400 DRUMS WITHIN THE DESTROYED BA DON BARRACKS AREA. AREA WAS REPEATEDLY STRUCK DURING MID-JULY WITH AN UNDETERMINED NUMBER OF DRUMS OBSERVED BURNING ON SEVERAL POST-STRIKE MISSIONS. ONE BURIED TANK WAS ALSO PROBABLY DESTROYED.

ESTIMATED CAPACITY: PRE-STRIKE TANK 192 MT DRUM 230 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6264 II, JUN 62 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-11, JUN 65 (U)

PHOTO REFERENCE

25X1A



875

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

25X1C

NO FOREIGN DISSE

R-218/66

BA DON POL STORAGE AREA

XE526634

UTM COORDINATES

1745N 10626E

GEOGRAPHIC COORDINATES



B76

CONFIDENTIAL

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

25X1C

NO FOREIGN DISSEM

R-218/66

25X1A

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
	WF786702	1843N 10544E

NAME: PHUC LOI PETROLEUM PRODUCTS STORAGE NAVY

LOCATION: IMMEDIATELY WEST OF PHUC LOI NAVAL BASE AND 5.2 NM NE OF VINH

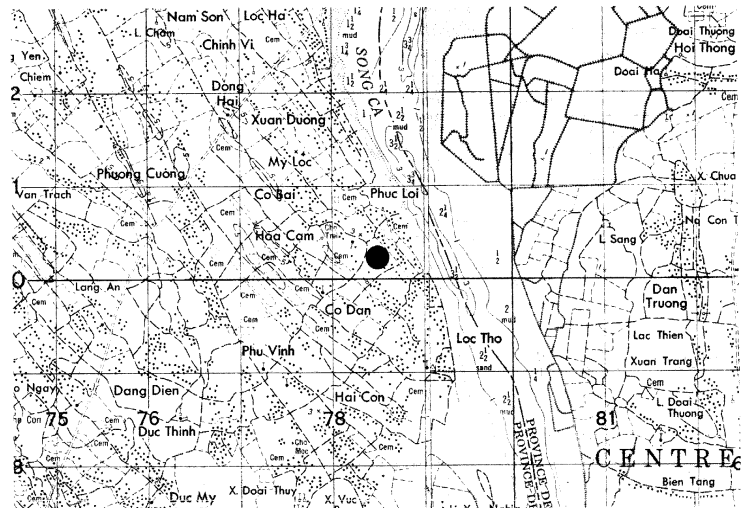
DESCRIPTION: FACILITY CONSISTS OF 2 POL BUNKERS, EACH APPROXIMATELY 60 X 20 FT, APPARENTLY CONTAINING 6 PROBABLE HORIZONTAL TANKS EACH. NATURE OF TANKS AND THEIR CAPACITIES ARE UNKNOWN. A PROBABLE PUMPHOUSE IS IMMEDIATELY EAST OF BUNKERS.

ESTIMATED CAPACITY: UNKNOWN

MAP REFERENCES: AMS SERIES L701, SHEET 6167 III, 1ST ED, DEC 60 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-7, JUN 65 (U)

PHOTO REFERENCE:

25X1A



25X1C

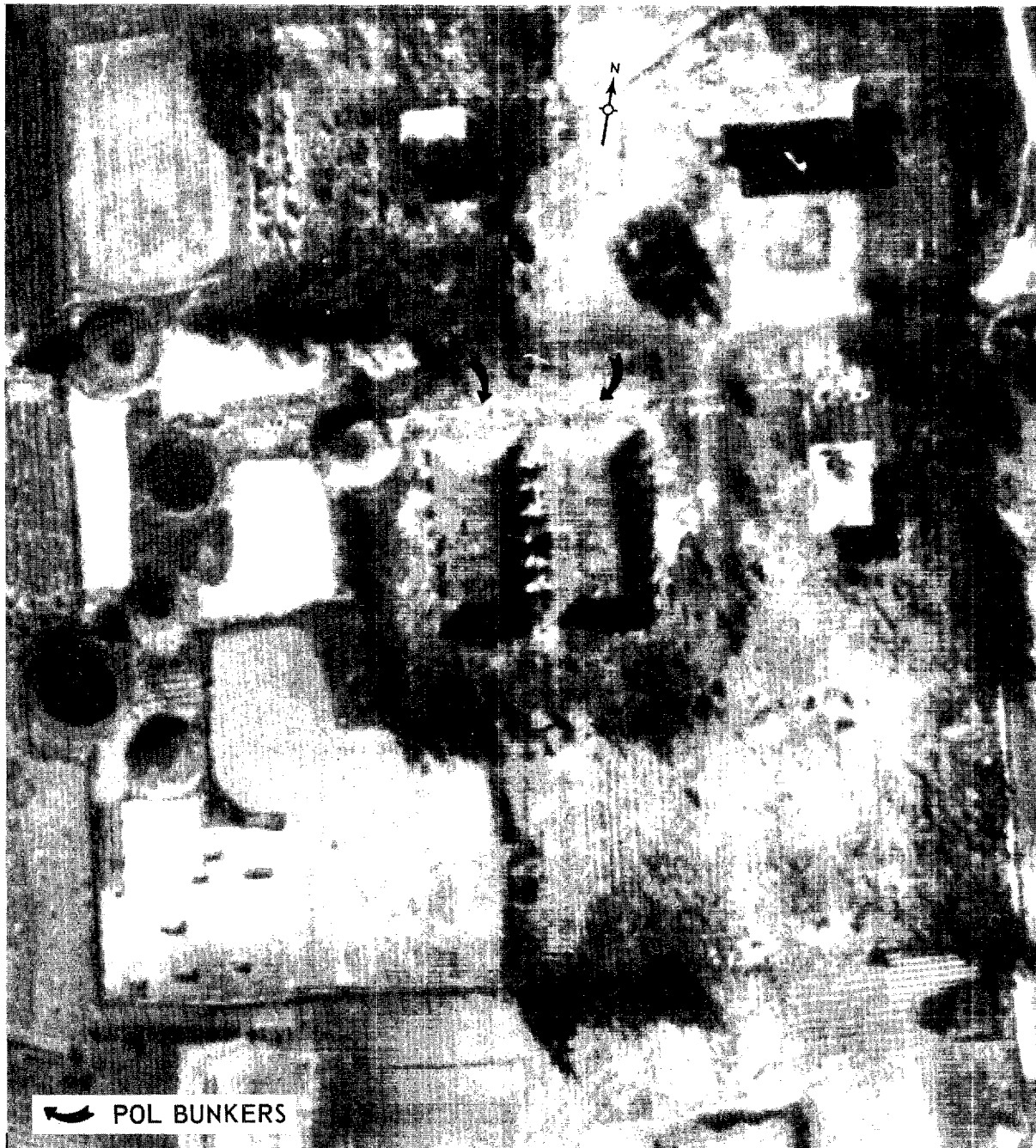
CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

P-218/66

PHUC LOI PETROLEUM PRODUCTS STORAGE NAVY

WF786702
UTM COORDINATES

1843N 10544E
GEOGRAPHIC COORDINATES



B78

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
CONFIDENTIAL
NO FOREIGN DISSEM

CONFIDENTIAL

R-218/66

TABLE OF CONTENTS CATEGORY C

<u>BE No.</u>	<u>Installation Name</u>	<u>Page Nos.</u>
	Ky Tran POL Storage Area	C1, C2
	Ky Anh POL Drum Storage	C3, C4
	Hon Gai POL Drum Storage	C5, C6
	Thanh Hoa POL Distribution Area	C7, C8

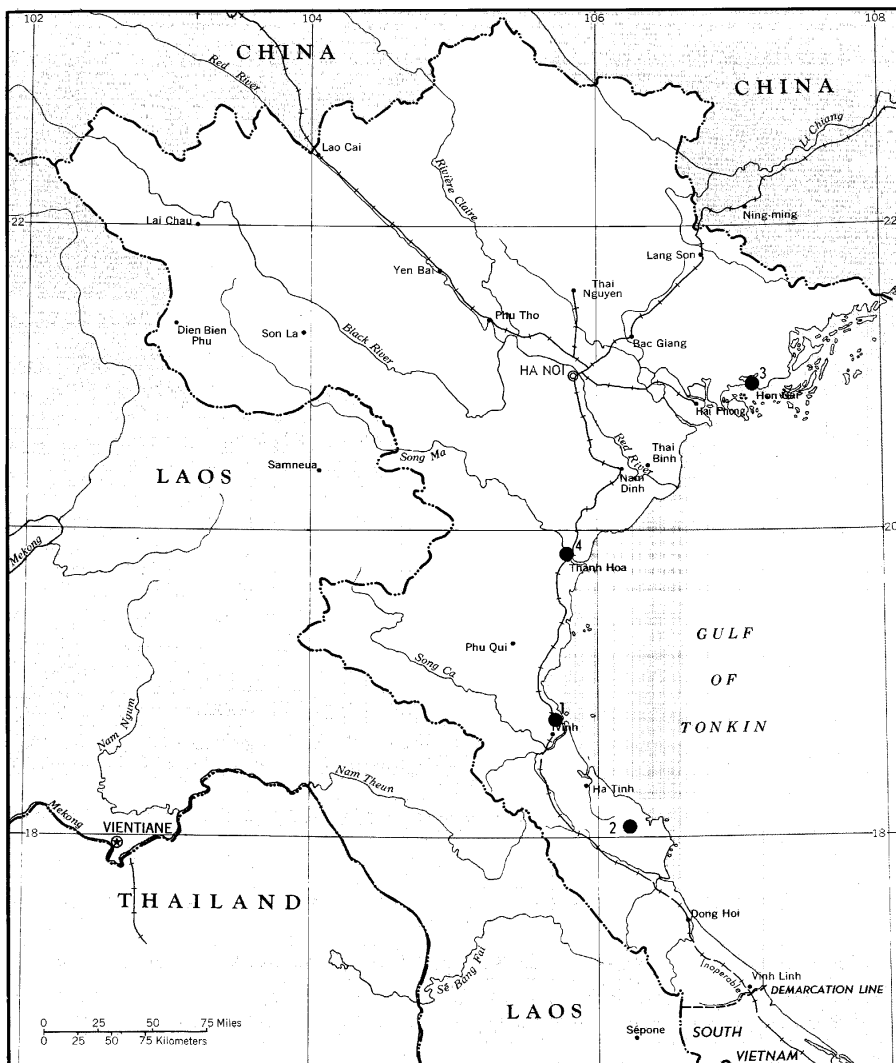
CONFIDENTIAL

CONFIDENTIAL

R-218/66

25X1C

NO FOREIGN DISSEM



KEY TO CATEGORY C
DRUM STORAGE AREAS

1. Ky Tran POL Storage Area
2. Ky Anh POL Drum Storage
3. Hon Gai POL Drum Storage
4. Thanh Hoa POL Distribution Area

25X1C

CONFIDENTIAL

CONFIDENTIAL

NO FOREIGN DISSEM

R-218/66

0617-
BE NUMBER

WF705767
UTM COORDINATES

1847N 10540E
GEOGRAPHIC COORDINATES

NAME: KY TRAN POL STORAGE AREA

LOCATION: 0.2 NM SOUTH OF KY TRAN, 6.9 NM NORTH OF VINH, AND 1.2 NM EAST OF ROUTE 1A AND THE THANH HOA/VINH RAIL LINE

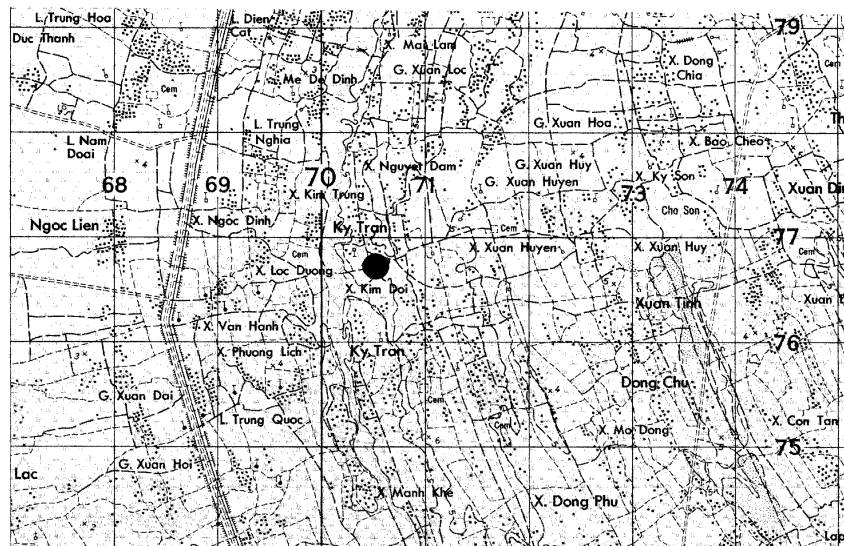
DESCRIPTION: STORAGE AREA CONSISTS OF AT LEAST 24 PARALLEL TRENCHES IN 3 LIGHTLY WOODED AREAS ALONG BOTH SIDES OF A SECONDARY ROAD JUST SOUTH OF KY TRAN. APPROXIMATELY 1,000 POL DRUMS ARE STORED IN THESE TRENCHES. THE PART OF THE AREA SHOWN IN INSET IS AT UTM WF708768.

ESTIMATED CAPACITY: DRUM 200 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6167 III, 1ST ED, DEC 60 (U)
AMS SERIES JOG(G), SHEET NE 48-7, 1ST ED, DEC 65 (U)

PHOTO REFERENCE:

25X1D



C1

25X1C

CONFIDENTIAL

CONFIDENTIAL

R-218/66

WF705767
UTM COORDINATES

KY TRAN POL STORAGE AREA

1847N 10540E
GEOGRAPHIC COORDINATES



C2

CONFIDENTIAL

NO FOREIGN DISSEM

R-218/66

XE374991

UTM COORDINATES

1804N 10618E
GEOGRAPHIC COORDINATES

NAME: KY ANH POL DRUM STORAGE

LOCATION: 26 NM SE OF HA TINH AND WITHIN THE NORTHERN HALF OF THE KY ANH CITADEL

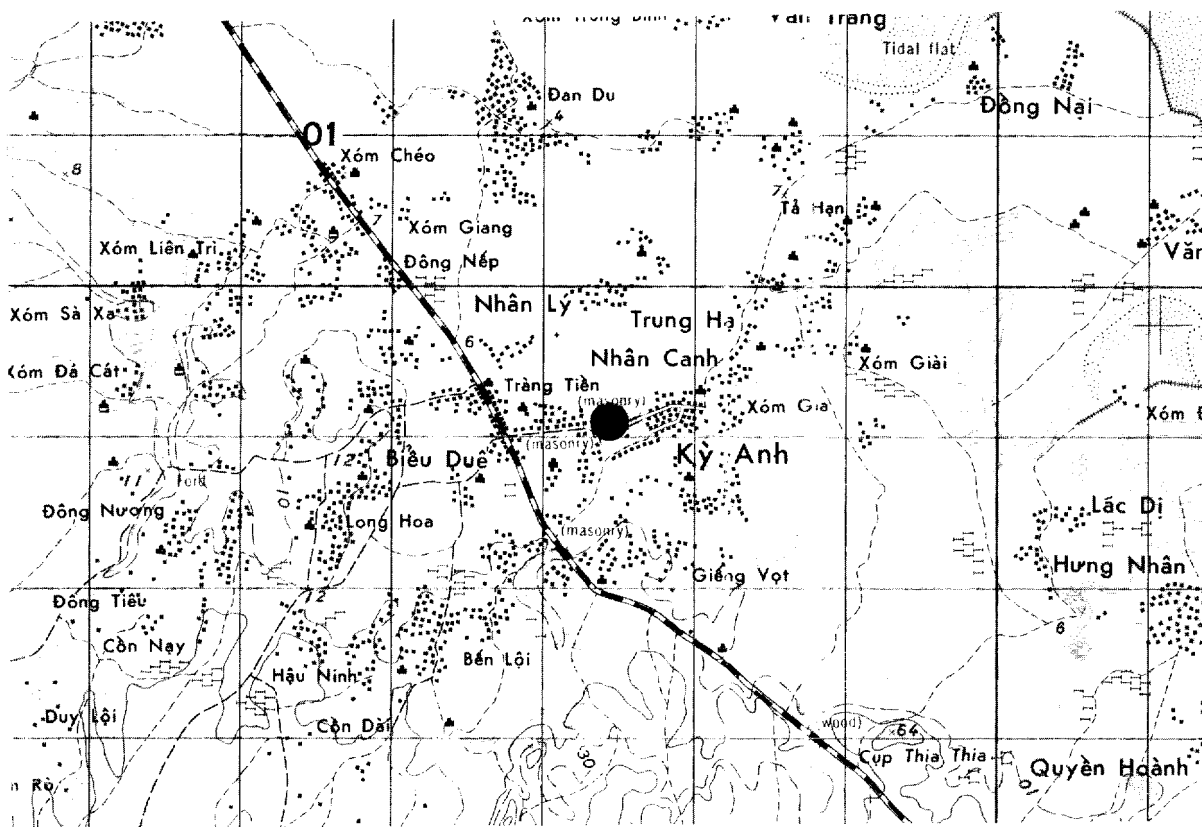
DESCRIPTION: A SYSTEM OF OPEN TRENCHES CONTAINS AT LEAST 215 POL DRUMS.

ESTIMATED CAPACITY: DRUM 43 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6265 II, 1ST ED, JUN 62 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-7, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



25X1C

NO FOREIGN DISSEM

P-218/66

KY ANH POL DRUM STORAGE

XE374991

1804N 10618E

UTM COORDINATES

GEOGRAPHIC COORDINATES



C4

25X1C

25X1C

CONFIDENTIAL
 Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSEM

R-218/66

0615-
BE NUMBER

YJ168177
UTM COORDINATES

2056N 10705E
GEOGRAPHIC COORDINATES

NAME: HON GAI POL DRUM STORAGE

LOCATION: ON SE EDGE OF HON GAI

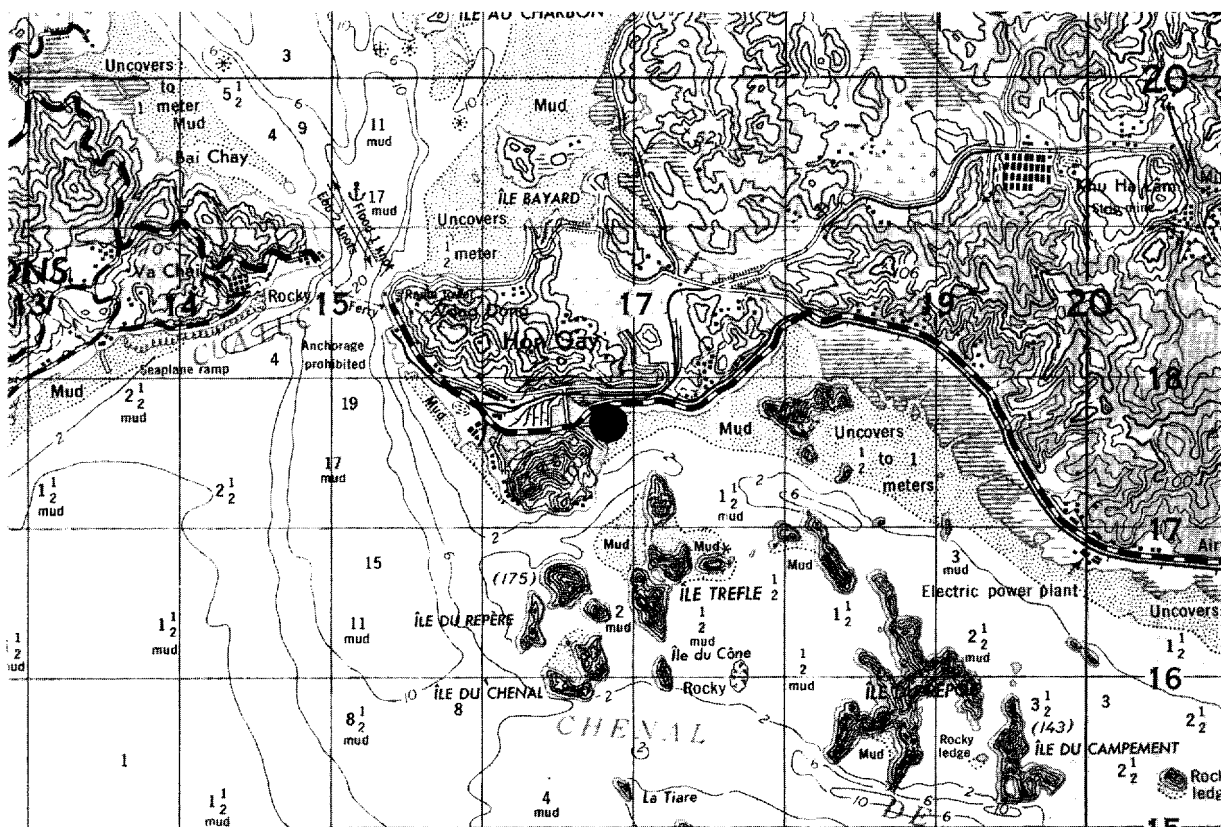
DESCRIPTION: APPROXIMATELY 240 POL DRUMS IN OPEN STORAGE ARE LOCATED IN THE IMMEDIATE VICINITY OF THE ABOVE COORDINATES, IMMEDIATELY SOUTH OF ROUTE 18.

ESTIMATED CAPACITY: DRUM 48 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6473 IV, 1ST ED, APR 63 (U)
 AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



25X1C

C5

CONFIDENTIAL
 Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSEM

25X1C

CONFIDENTIAL

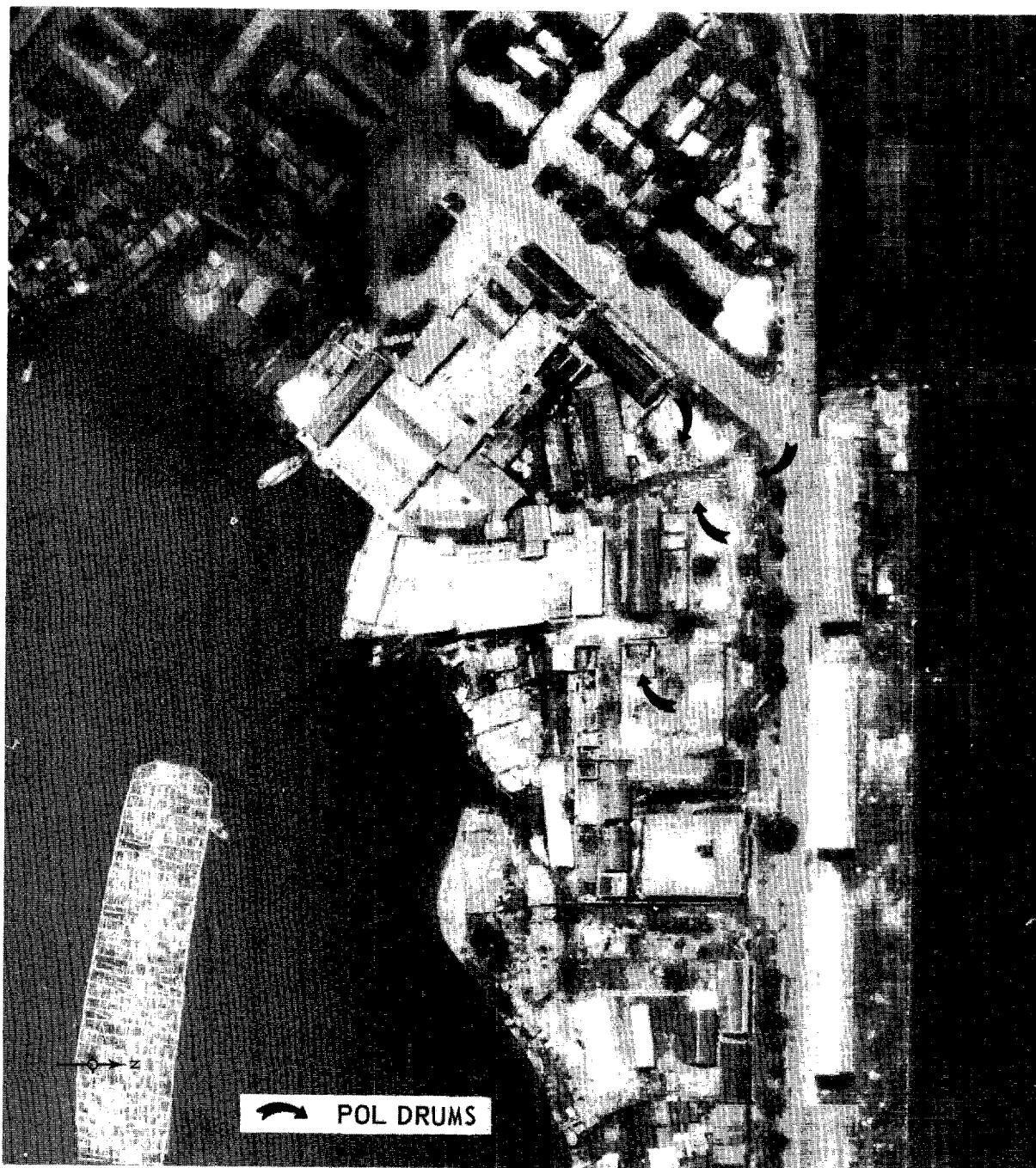
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

HON GAI POL DRUM STORAGE

YJ168177
UTM COORDINATES

2056N 10705E
GEOGRAPHIC COORDINATES



C6

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1A

0615-
BE NUMBER

UTM COORDINATES

1950N 10546E
GEOGRAPHIC COORDINATES

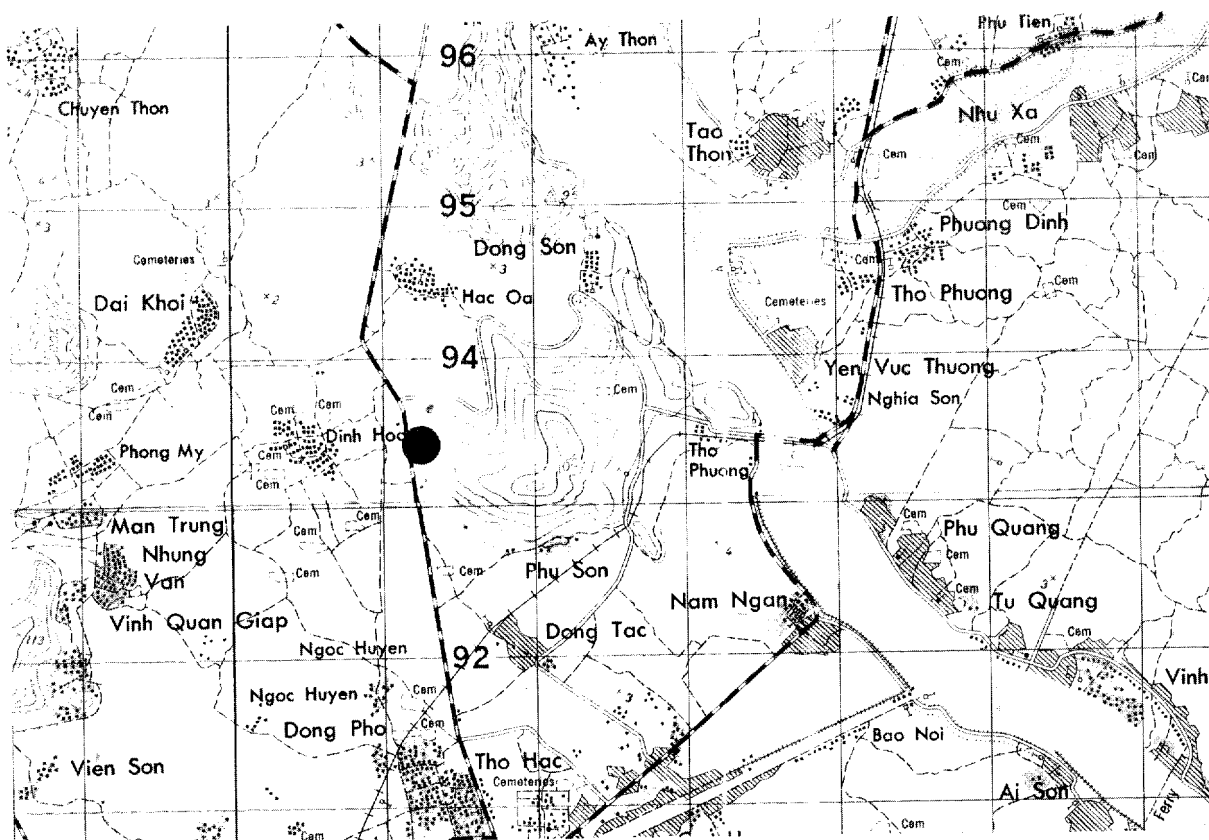
NAME: THANH HOA POL DISTRIBUTION AREA

LOCATION: 1.9 NM NORTH OF THANH HOA AND IMMEDIATELY EAST OF ROUTE 119

DESCRIPTION: FACILITY CONSISTS OF 2 AREAS PROBABLY USED FOR POL DRUM DISTRIBUTION. NORTH AREA CONTAINS ONE MEDIUM TANK AND AT LEAST SIX HUNDRED 30-GAL-TYPE DRUMS SCATTERED IN OPEN STORAGE IN GROUPS OF 10 TO 75 DRUMS EACH. SOUTH AREA CONTAINS AT LEAST 6 TANKS, AND APPROXIMATELY TWO HUNDRED TWENTY-FIVE 30-GAL-TYPE DRUMS IN OPEN STORAGE.
ESTIMATED CAPACITY: TANK 84 MT DRUM 91 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6170 I, 3D ED, AUG 65 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-3, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:



C7

CONFIDENTIAL

R-218/66

THANH HOA POL DISTRIBUTION AREA

WG812935
UTM COORDINATES

1950N 10546E
GEOGRAPHIC COORDINATES



25X1C

C8

CONFIDENTIAL

TABLE OF CONTENTS CATEGORY D

<u>BE No.</u>	<u>Installation Name</u>	<u>Page Nos.</u>
	Thuy Phuong POL Storage Tanks	D1, D2
	Ha Noi Probable POL Tank Fabrication Area 1	D3, D4
	Ha Noi Probable POL Tank Fabrication Area 2	D5, D6
	Ninh Binh (POL Tanks in Sampan)	D7, D8
	Thanh Thuy POL Tanks	D9, D10
	Lang Khe POL Storage Area Under Construction	D11, D12
	Nho Lam POL Drum Transshipment Area	D13, D14
	Phuc Yen POL Truck Dispersal Area	D15, D16
	Sac Le POL Tanks	D17, D18

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

25X1

R-218/66

0616-
BE NUMBER

WJ809323
UTM COORDINATES

2105N 10546E
GEOGRAPHIC COORDINATES

NAME: THUY PHUONG POL STORAGE TANKS

LOCATION: NE SECTION OF THUY PHUONG AND 5.3 NM NW OF HA NOI

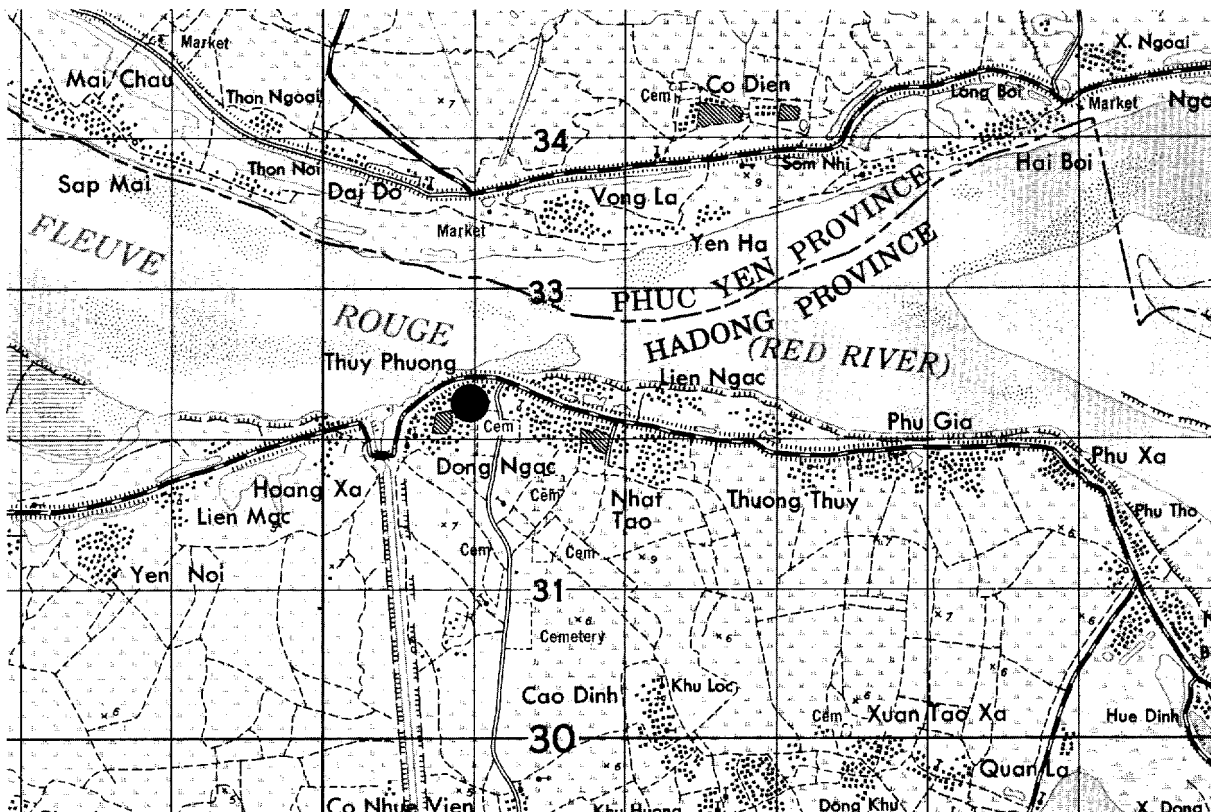
DESCRIPTION: SITE CONTAINS A TOTAL OF 65 (55 STANDARD AND 10 LARGE) TANKS IN RANDOM STORAGE. THIRTY-SIX UNASSEMBLED TANK SECTIONS ARE ALSO OBSERVED. NO PERMANENT POL STORAGE FACILITY IS APPARENT AT THIS SITE.

ESTIMATED CAPACITY: NOT APPLICABLE

MAP REFERENCES: AMS SERIES L701, SHEET 6174 II, 3D ED, APR 63 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



D1

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

25X1

25X1C

CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

NINH BINH (POL TANKS IN SAMPAN)

XH024395

2115N 10559E

UTM COORDINATES

GEOGRAPHIC COORDINATES



25X1C

D8
CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

CONFIDENTIAL

R-218/66

1747N 10615E
GEOGRAPHIC COORDINATES

LOCATION: JUST SOUTH OF ROUTE 110 AND 0.5 NM SE OF THANH THUY

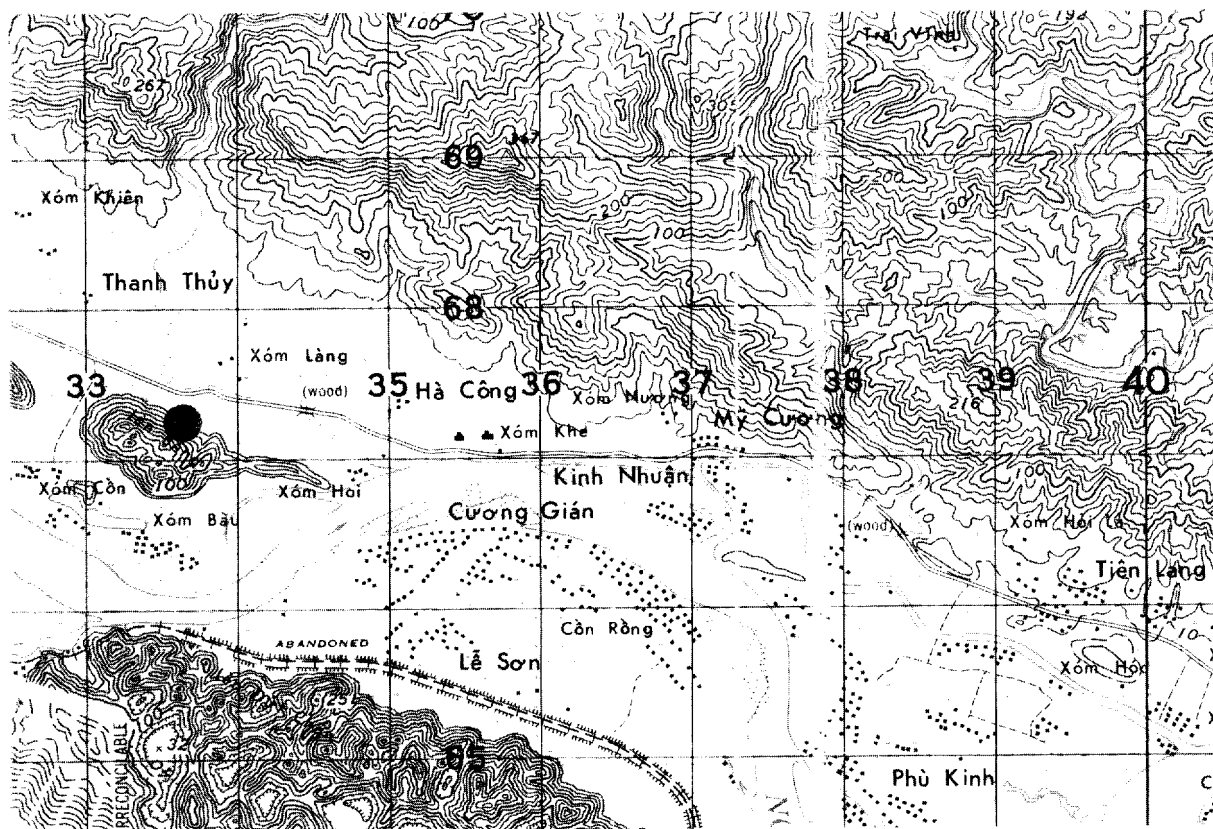
DESCRIPTION: SITE NOW CONTAINS 9 MEDIUM TANKS NEAR BASE OF KARST HILL. PHOTOGRAPHY [REDACTED] REVEALS 11 TANKS AND TWO 4-WHEEL GENERATORS AT PROBABLE [REDACTED] WEST OF TANKS.

ESTIMATED CAPACITY: TANK 108 MT

MAP REFERENCES: AMS SERIES L701, SHEETS 6264 II AND III, 1ST ED, JUN 62 (U)
AMS SERIES JOG(G) 1501, SHEET NE 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



09

25X1C

Approved For Release 2002/05/20 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM [REDACTED]

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

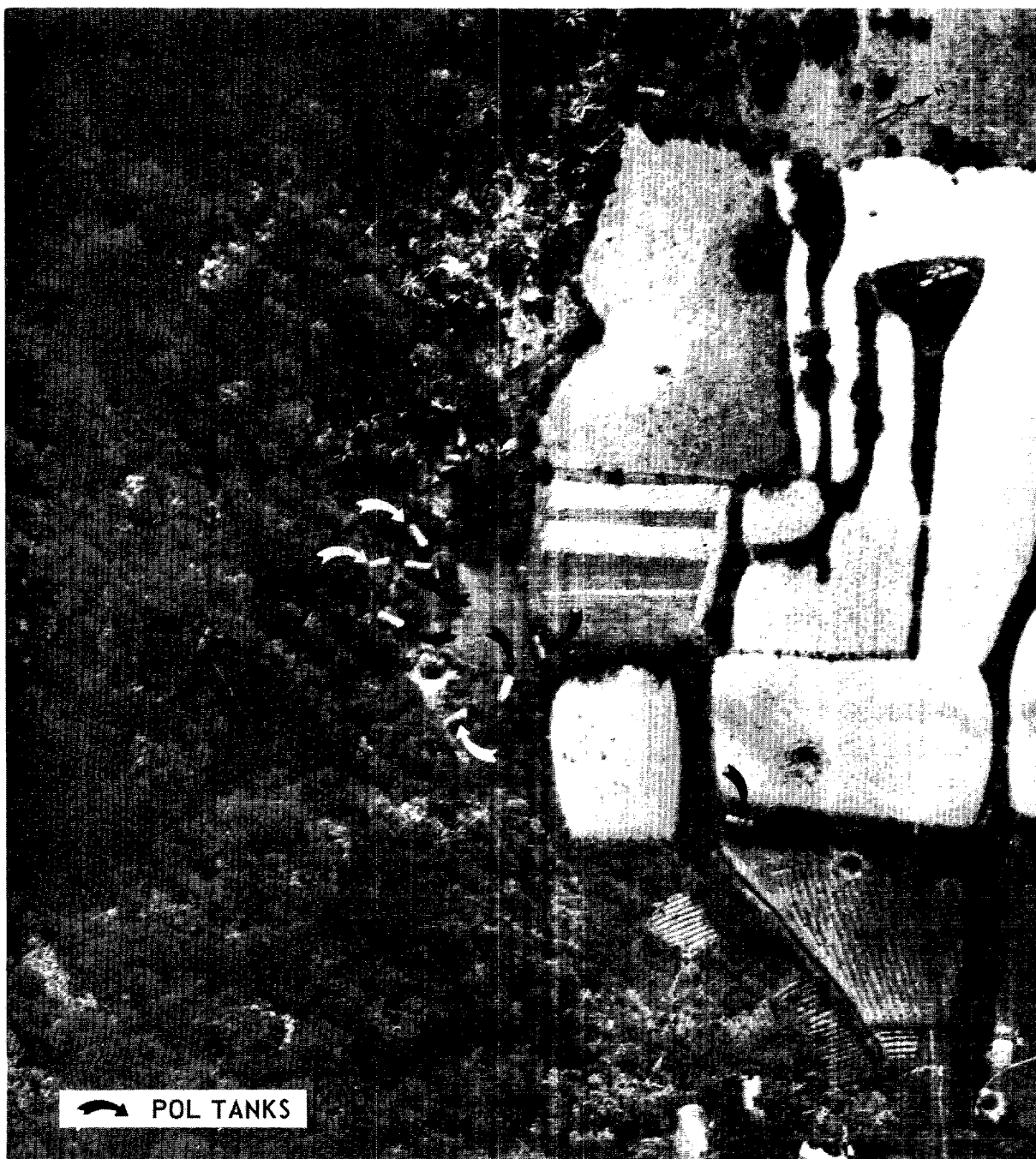
25X1C

R-218/66

THANH THUY POL TANKS

XE337673
UTM COORDINATES

1747N 10615E
GEOGRAPHIC COORDINATES



 POL TANKS

D10

25X1C Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSE

CONFIDENTIAL

R-218/66

0616-
BE NUMBER

WJ855726
UTM COORDINATES

2127N 10549E
GEOGRAPHIC COORDINATES

NAME: LANG KHE POL STORAGE AREA UNDER CONSTRUCTION

LOCATION: 0.1 NM SOUTH OF LANG KHE, 8.4 NM SSW OF THAI NGUYEN, 2.4 NM WEST OF ROUTE 3, AND 3 NM WEST OF THE HA NOI/THAI NGUYEN RAILROAD

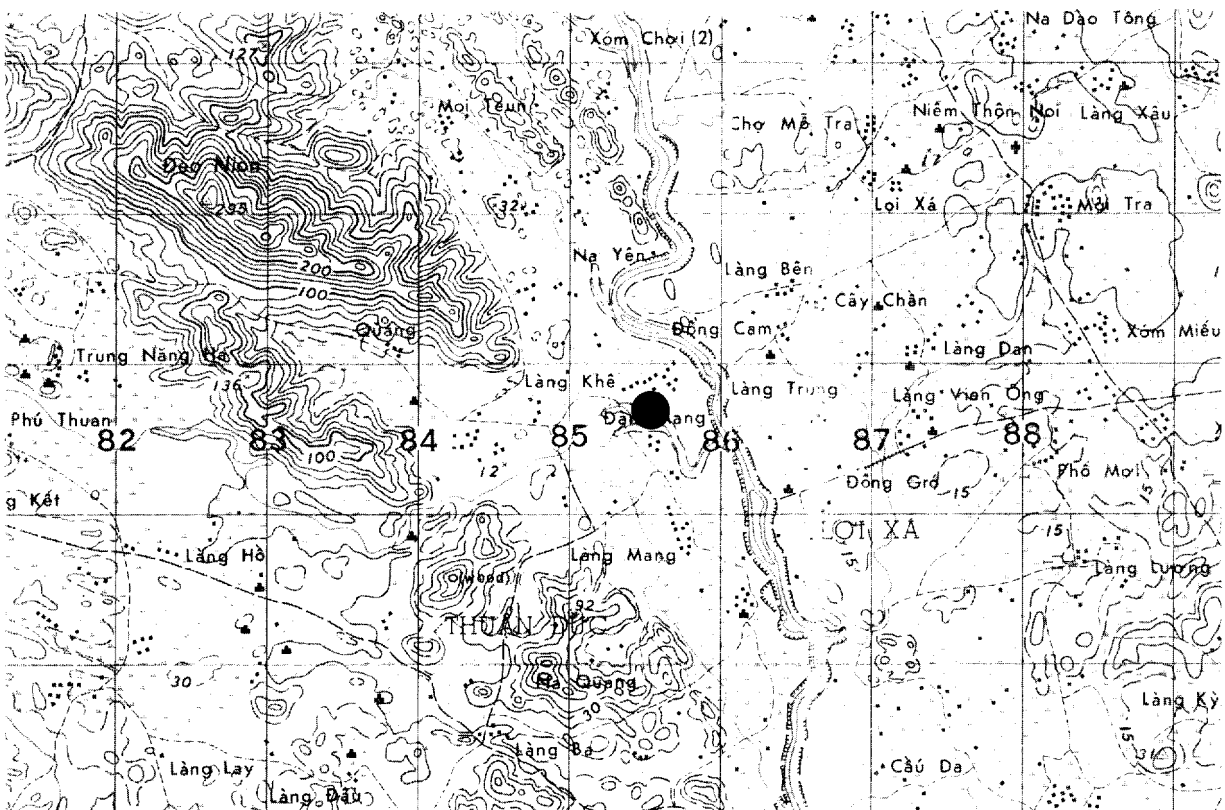
DESCRIPTION: AREA CONTAINS 35 EXCAVATIONS AROUND THE EDGE OF A FIELD PATTERN BETWEEN LANG KHE AND A SMALL STREAM. NO TANKS ARE OBSERVED, BUT EXCAVATIONS APPEAR TO BE IDENTICAL TO THOSE USED FOR POL TANK BURIAL.

ESTIMATED CAPACITY: NONE

MAP REFERENCES: AMS SERIES L701, SHEET 6175 II, 1ST ED, OCT 63 (U)
 AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



011

25X1C

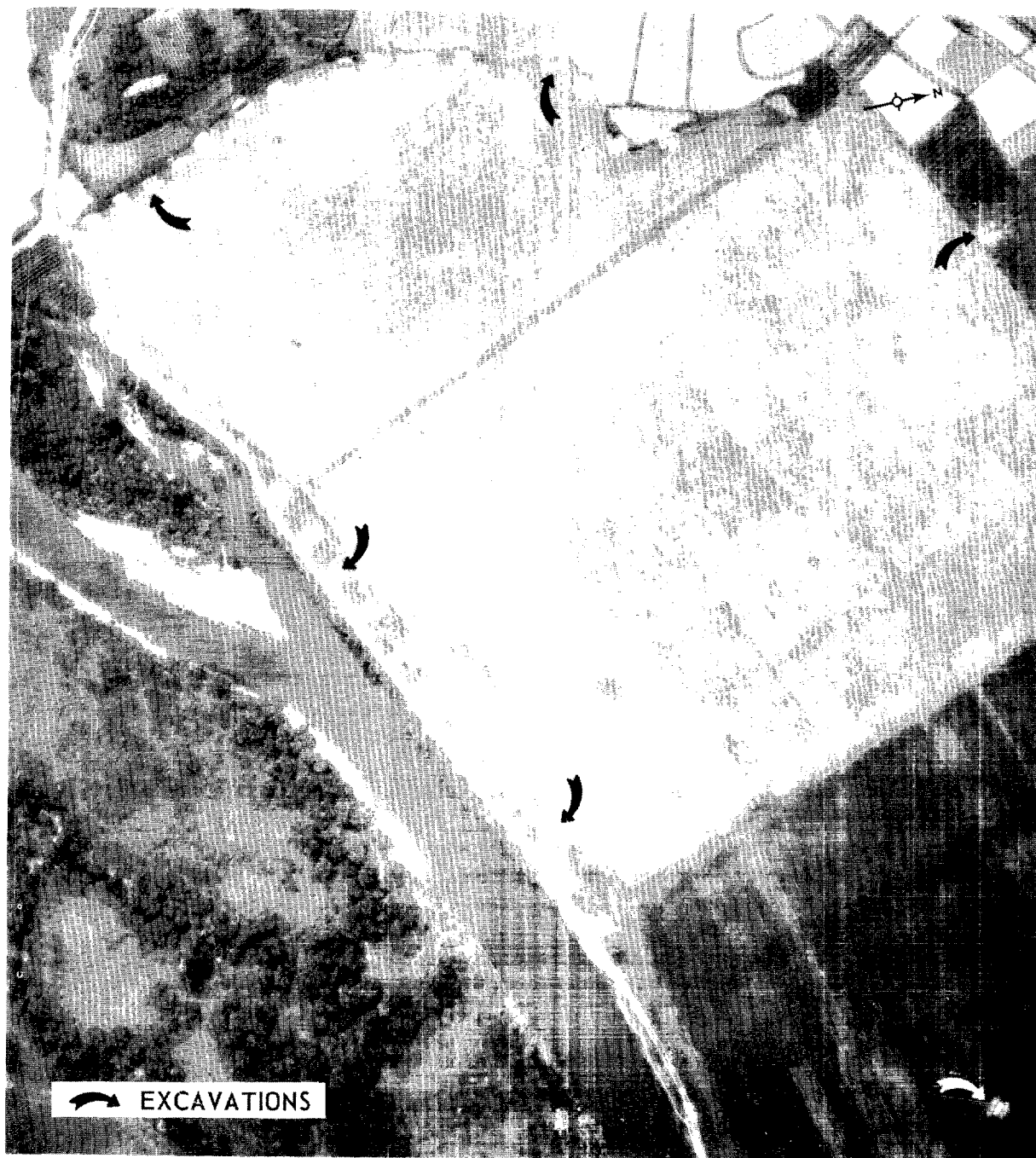
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

CONFIDENTIAL

NO FOREIGN DISSE

R-218/66

LANG KHE POL STORAGE AREA UNDER CONSTRUCTION
WJ855726 2127N 10549E
UTM COORDINATES **GEOGRAPHIC COORDINATES**



CONFIDENTIAL
Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

0617-
BE NUMBER

1856N 10535E
GEOGRAPHIC COORDINATES

LOCATION: 0.7 NM EAST OF NHO LAM AND 1.2 NM WEST OF ROUTE 1A

ESTIMATED CAPACITY: DRUM 35 MT

PHOTO REFERENCE:

This is a detailed black and white map of a region in North Vietnam, showing a grid of roads and numerous place names. The map includes labels for towns like Trung Dong, Ha Cat, Phu Hau, and others, as well as geographical features like rivers and hills. A prominent road runs vertically through the center, and another runs horizontally across the middle. The map is marked with a grid of numbers 91, 92, 93, and 94.

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISS

R-218/66

WF618938
UTM COORDINATES

NHO LAM POL DRUM TRANSshipment AREA
1856N 10535E
GEOGRAPHIC COORDINATES



R-218/66

0616-

BE NUMBER

WJ868505

UTM COORDINATES

2115N 10550E

GEOGRAPHIC COORDINATES

NAME: PHUC YEN POL TRUCK DISPERSAL AREA

LOCATION: 2.6 NM NE OF PHUC YEN AIRFIELD AND 0.7 NM SOUTH OF PHUC YEN PETROLEUM PRODUCTS STORAGE NINE UNDERGROUND [REDACTED]

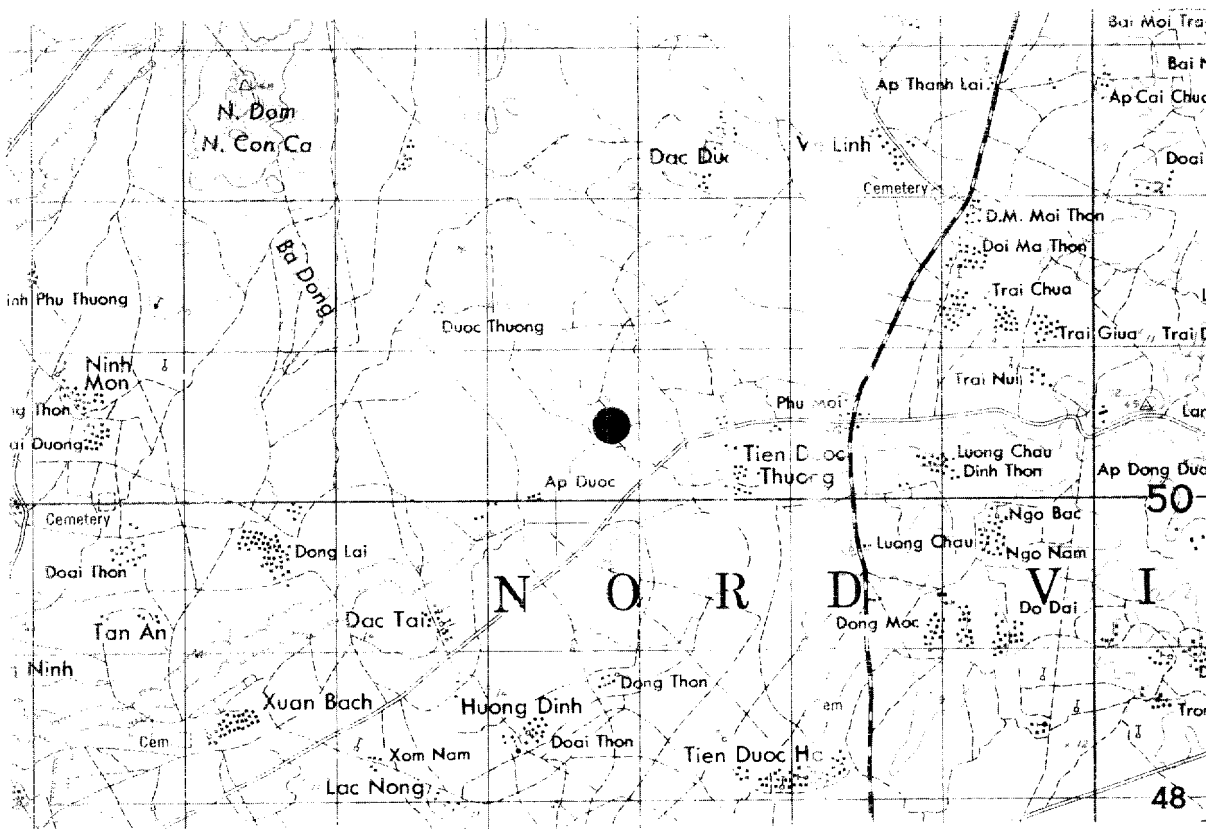
DESCRIPTION: DISPERSAL AREA CONSISTS OF 8 POL TANK TRUCKS (6 SHOWN ON PHOTO), PROBABLE ZIL ATS 4-150, PARKED IN VEHICLE REVERTMENTS AT BASE OF SMALL HILLS.

ESTIMATED CAPACITY: EACH TRUCK 4.13 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6174-I, 3D ED, JAN 59 (U)
AMS SERIES JOG (G) 1501, SHEET NO 48-11, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



R-218/66

WJ868505
UTM COORDINATES

PHUC YEN POL TRUCK DISPERSAL AREA

2115N 10550E
GEOGRAPHIC COORDINATES



D16

25X1C

2058N 10709E
GEOGRAPHIC COORDINATES

NAME: SAC LE POL TANKS

LOCATION: 0.6 NM NORTH OF SAC LE AND 4 NM ENE OF PHU GAI

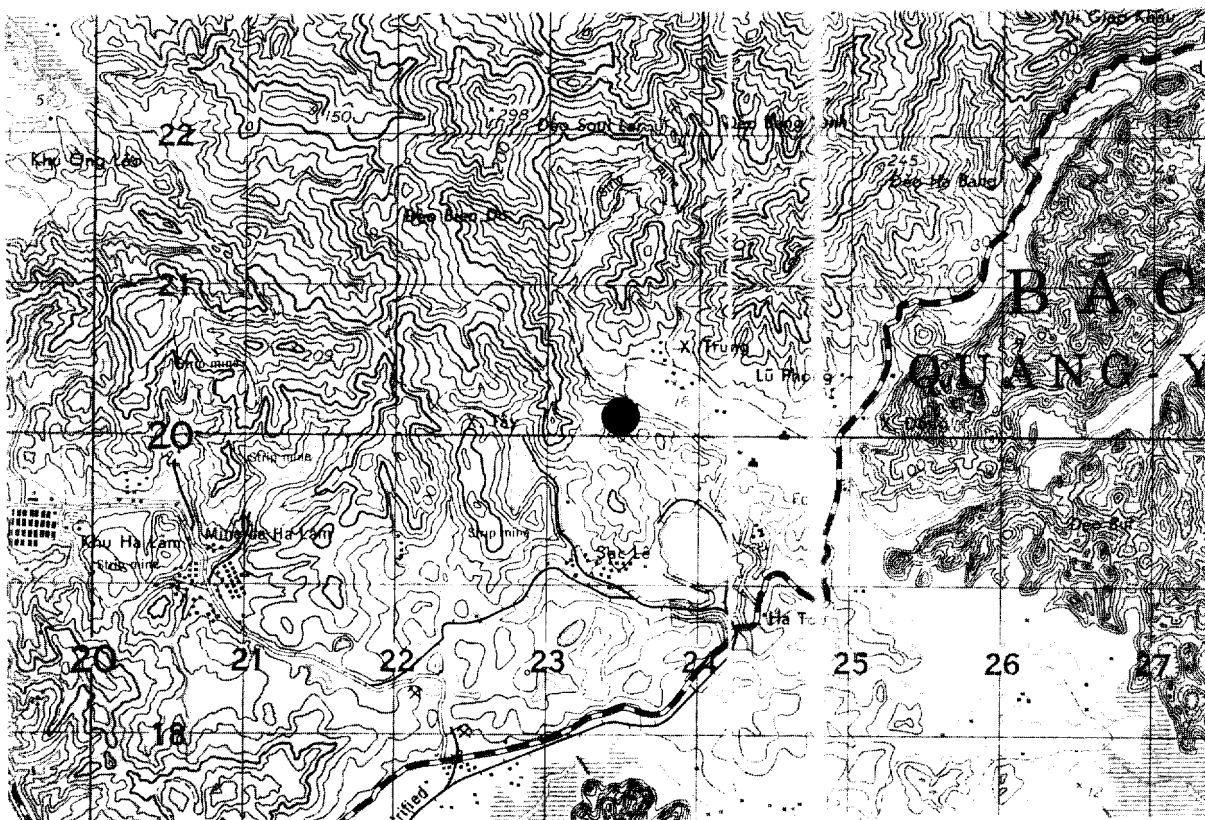
DESCRIPTION: AREA CONTAINS 6 LARGE HORIZONTAL POL ARKS ABOVE GROUND
ALONGSIDE OF A SECONDARY ROAD.

ESTIMATED CAPACITY: TANK 150 MT

MAP REFERENCES: AMS SERIES L701, SHEET 6473 IV, 1ST ED, APR 53 (U)
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, JUN 65 (U)

PHOTO REFERENCE:

25X1D



NO FOREIGN DISSEM

25X1C

CONFIDENTIAL

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

SAC LE POL TANKS

YJ235202
UTM COORDINATES

2058N 10709E
GEOGRAPHIC COORDINATES



25X1C

D18

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
CONFIDENTIAL

NO FOREIGN DISSEM

SECRET

R-218/66

HAI PHONG PETROLEUM PRODUCTS STORAGE
JCS-48

XJ730087
UTM COORDINATES

25X1A

2052N 10639E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

25X1
25X1

THIS FENCED FACILITY IS ABOUT 2 NM WNW OF HAI PHONG. PRIOR TO STRIKE OF 29 JUNE 1966, IT CONTAINED 30 ABOVEGROUND, CYLINDRICAL, STEEL STORAGE TANKS RANGING FROM [] TO 115 FEET IN DIAMETER, AND 5 HORIZONTAL TANKS ABOUT 10 TO [] FEET IN DIAMETER. EXTENSIVE SUPPORT FACILITIES INCLUDE ABOUT 15 - 17 WAREHOUSE-TYPE BUILDINGS RANGING FROM 110' X 70' TO 860' X 150'. NUMEROUS SMALLER SUPPORT BUILDINGS AND OPEN STORAGE AREAS ARE DISPERSED THROUGHOUT THE FACILITY. TRANSPORTATION SERVICES CONSIST OF 3 OIL PIERS, 3 BRANCH RAIL LINES, AND A WELL-DEVELOPED ROAD SYSTEM.

THIS DEPOT, WITH A TOTAL STORAGE CAPACITY OF 48,348 MT, IS OF CRITICAL IMPORTANCE TO THE MILITARY FORCES, INDUSTRIAL BASE, TRANSPORTATION SYSTEMS, AND GENERAL CIVILIAN ECONOMY OF NORTH VIETNAM. REPRESENTING APPROXIMATELY ONE-THIRD OF THE COUNTRY'S POL STORAGE CAPACITY, THIS DEPOT RECEIVES AND DISTRIBUTES ABOUT 90 PERCENT OF THE PETROLEUM PRODUCTS ENTERING THE COUNTRY. THIS IS THE ONLY FACILITY CURRENTLY CAPABLE OF OFF-LOADING LARGE, OCEAN-GOING TANKERS.

THERE ARE 19 IDENTIFIED SAM SITES WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET; AN ADDITIONAL 10 SITES ARE 18 - 30 NM DISTANT. IDENTIFIED AAA ACTIVITY WITHIN 3 NM OF THE TARGET INCLUDES 13 ACTIVE SITES CONSISTING OF 8 OCCUPIED 100MM REVETMENTS, 60 OCCUPIED 57MM/85MM REVETMENTS, AND 11 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 7 INACTIVE AAA SITES IN THE IMMEDIATE AREA. MODERATE TO INTENSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

DAMAGE OBJECTIVE IS DESTRUCTION OF STORED POL. DAMAGE CRITERION IS RUPTURE OF STORAGE TANKS AND DISTORTION OF EXPOSED PIPING AND EQUIPMENT. FIRING OF SPILLED CONTENTS WILL ENHANCE DISABILITY. LOSS OF THIS FACILITY AND THE STOCKS ON HAND WOULD INDUCE CRITICAL SHORTAGES OF FUELS THROUGHOUT ALL CONSUMING SECTORS OF THE NORTH VIETNAMESE ECONOMY, THE MILITARY FORCES, AND THE VIET CONG AND PATHET LAO. LOSS OF TANKAGE AND MARINE TERMINAL FACILITIES WOULD FORCE RELIANCE ON THOSE LIMITED STOCKS ON HAND, AND ON THE SEVERELY REDUCED FLOW OF IMPORTS THAT COULD BE BROUGHT IN BY RAIL AND SMALL COASTAL VESSEL.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE A PERIOD OF SEVERAL MONTHS OR POSSIBLY MUCH LONGER. NORTH VIETNAM IS NOT KNOWN TO BE MANUFACTURING TANK COMPONENTS, APPROPRIATE STEEL TUBING, PUMPS, OR OTHER ITEMS BASIC TO THE CONSTRUCTION OR MAINTENANCE OF POL STORAGE FACILITIES. THE EXISTING RELIANCE ON IMPORTED MATERIALS AND SKILLS IS

PREPARED BY DEFENSE INTELLIGENCE AGENCY

X-A15

R-218/66

EXPECTED TO CONTINUE INDEFINITELY. ALTHOUGH PREFABRICATED TANKS OF SOVIET DESIGN CAN BE INSTALLED AT A PREPARED SITE IN ABOUT A WEEK, IT APPEARS UNLIKELY THAT EITHER THE SOVIETS OR THE COMMUNIST CHINESE COULD PLACE ALL NECESSARY ELEMENTS TOGETHER IN LESS THAN 4 WEEKS, EVEN UNDER EMERGENCY CONDITIONS.

BOMB DAMAGE ASSESSMENT

THE THIRD STRIKE ON THE TARGET OCCURRED ON 3 AUGUST 1966 BY 16 USN AIRCRAFT, SUPPORTED BY 22 OTHER USN AIRCRAFT. ORDNANCE EXPENDED WAS 59/MK 81, 54/MK 82, 30/MK 83, 4/64-2.75" ROCKETS, AND 3/AGM 45.

NINETEEN HORIZONTAL PARTLY UNDERGROUND TANKS, NOT PREVIOUSLY NOTED, WERE REVEALED ON THE [REDACTED] PHOTOGRAPHY. OF THESE, 15 ARE 25-MT TYPE AND 4 ARE 12-MT TYPE. THESE TANKS WERE APPARENTLY UNDAMAGED.

OF THE 35 POL STORAGE TANKS, 27 WERE DESTROYED AND 8 DAMAGED (6 SEVERE, 2 SUPERFICIAL). ONLY 4,257 MT OF RESIDUAL STORAGE CAPACITY REMAINS. APPROXIMATELY 92 PERCENT OF THE ORIGINAL STORAGE CAPACITY WAS DESTROYED. ONE PUMPHOUSE AND 8 SUPPORT BUILDINGS WERE DESTROYED. SEVENTEEN ADDITIONAL BUILDINGS WERE DAMAGED (5 SEVERE, 1 MODERATE, 11 SUPERFICIAL). THE REMAINING PUMPHOUSE WAS SUPERFICIALLY DAMAGED.

X-A16

TABLE OF CONTENTS CATEGORY B

25X1A

<u>Installation Name</u>	<u>Page Nos.</u>
Thai Nguyen Petroleum Products PUG South	X-B1
Van Lung Petroleum Products Storage UG	X-B3
Van Lung Petroleum Products Storage West UG	X-B5
Hoang Mai POL Storage Area	X-B7
Ha Noi Petroleum Products Thi Cam	X-B9
Bai Thuong Petroleum Products Storage UG Southeast	X-B11
Son La Petroleum Products Storage	X-B13
Thuong Thon Petroleum Products Storage UG	X-B15
Ngoc Son Petroleum Products Storage PUG	X-B17
Thai Lai Petroleum Products Storage	X-B19
Yen Hau Petroleum Products Storage PUG	X-B21
Thanh Lang Petroleum Products Storage PUG	X-B23
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 1)	X-B25
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 2)	X-B27
Bang So Petroleum Products Storage PUG	X-B29
Son Chau Petroleum Products Storage PUG	X-B31
Kep Petroleum Products Storage (JCS-51.18)	X-B33
Ha Noi Petroleum Products Storage Duc Noi (Area 1)	X-B35
Ha Noi Petroleum Products Storage Duc Noi (Area 2)	X-B37
Ha Noi Petroleum Products Storage Duc Noi (Area 3)	X-B39
Ha Noi Petroleum Products Storage Duc Noi (Area 4)	X-B41
Cu Van Petroleum Products Storage	X-B43
Cu Van Petroleum Products Storage East UG	X-B45
Dao Quan Petroleum Products Storage East	X-B47
Dao Quan Petroleum Products Storage West	X-B49
Nam Dinh Petroleum Products Storage PUG	X-B51
Tung Tu Petroleum Products Storage UG	X-B53
Phuc Yen Airfield POL Storage Area 1	X-B55
Phuc Yen Airfield POL Storage Area 2	X-B57
Xom Duong Quan Petroleum Products Storage UG East	X-B59
Xom Duong Quan Petroleum Products Storage UG	X-B61
Nui Tap Tinh POL Storage Area	X-B63
Sac Le POL Storage Area	X-B65
Phu Dong POL Storage Area	X-B67
Thuan Le POL Storage Area	X-B69
My Duc POL Storage Area	X-B71
Thanh Hoa POL Storage Area	X-B73
Ba Don POL Storage Area	X-B75
Phuc Loi Petroleum Products Storage Navy	X-B77

25X1A

SECRET

THAI NGUYEN PETROLEUM PRODUCTS PARTLY UNDERGROUND SOUTH

R-218/66

25X1A

WJ877956
UTM COORDINATES

2139N 10550E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS ROAD-SERVED STORAGE SITE, CONSISTING OF TWO AREAS 0.3 NM APART, IS 4.1 NM NORTH OF THAI NGUYEN AND 0.8 NM EAST OF VAN HAO. THE EASTERN AREA CONTAINS APPROXIMATELY 116 BUNKERED POL TANKS, 6 UNBURIED MEDIUM TANKS, 15 EXCAVATIONS, AND APPROXIMATELY 4,000 DRUMS DISPERSED UNDER TREES. THE WESTERN AREA HAS BEEN STRUCK AND CONTAINS APPROXIMATELY 475 DRUMS IN OPEN STORAGE AND IN 9 EXCAVATIONS. AN ADDITIONAL 9 EXCAVATIONS ARE EMPTY. ESTIMATED CAPACITY IS 1,464 MT IN TANKS AND 895 MT IN DRUMS.

EIGHT SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 10 ADDITIONAL SITES ARE WITHIN AN 18 - 30 NM RADIUS. IDENTIFIED AAA ACTIVITY IN THE THAI NGUYEN AREA INCLUDES 10 ACTIVE SITES CONSISTING OF 90 OCCUPIED 57MM/85MM REVETMENTS. IN ADDITION, THERE ARE 10 INACTIVE SITES IN THE AREA. INTENSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THE TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE ABOUT 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENTS. THE PRESENT RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

BOMB DAMAGE ASSESSMENT

THIS TARGET WAS STRUCK ON 21 JULY 1966 BY 4 USAF AIRCRAFT. ORDNANCE EXPENDED CONSISTED OF 20/1000#GP BOMBS.

THREE IMPACTS IN THE EASTERN AREA RESULTED IN 13 OIL DRUMS DESTROYED; THE REMAINING DRUM STORAGE WAS MOVED TO NEARBY REVETMENTS. THE WESTERN AREA HAD 5 IMPACTS, BUT NO POL DAMAGE.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

X-B1

25X1C

SECRET

YEN HAU PETROLEUM PRODUCTS STORAGE PARTLY UNDERGROUND

R-218/66

WG593166
UTM COORDINATES

25X1A

1908N 10534E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS ROAD-SERVED STORAGE AREA IS 0.5 NM NNW OF YEN HAU, 0.3 NM EAST OF ROUTE 116, AND 4 NM EAST OF ROUTE 1A. POST-STRIKE PHOTOGRAPHY REVEALS AT LEAST 30 UNDAMAGED BURIED TANKS WITH A CAPACITY OF 360 MT. THE MAJOR DAMAGE WAS APPARENTLY AROUND THE UNOCCUPIED EXCAVATION AND DRUM STORAGE AREAS. THE 2,000 DRUMS PREVIOUSLY REPORTED APPEAR TO HAVE BEEN DESTROYED. THE SITE IS PART OF THE DISPERSED STORAGE SYSTEM UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

TWO SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 1 ADDITIONAL SAM SITE HAS BEEN IDENTIFIED WITHIN AN 18 - 30 NM RADIUS. THERE IS NO IDENTIFIED AAA ACTIVITY IN THE VICINITY. SPARSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE APPROXIMATELY 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

BOMB DAMAGE ASSESSMENT

THE TARGET WAS STRUCK FOR THE SIXTH TIME ON 11 JULY 1966 BY 22 USN AIRCRAFT. ORDNANCE EXPENDED CONSISTED OF 24/250#GP BOMBS, 55/500#GP BOMBS, 27/1000#GP BOMBS, 12/500 SNAKEYE, AND 228/2.75" ROCKETS.

AN ESTIMATED 12 BURIED TANKS WERE DESTROYED; HOWEVER, [REDACTED] POST-STRIKE PHOTOGRAPHY PRECLUDES A COMPLETE DAMAGE ASSESSMENT.

25X1

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B21

25X1C

SECRET

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

R-218/66

NUI TAP TINH POL STORAGE AREA

25X1A

UTM COORDINATES

2103N 10648E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE IS LOCATED 1.5 NM NORTH OF NUI TAP TINH. IT CONTAINS 12 EXCAVATIONS, OF WHICH 2 APPEAR TO CONTAIN MEDIUM HORIZONTAL TANKS, AND 3 CONTAIN A TOTAL OF AT LEAST 13 POL DRUMS. ESTIMATED CAPACITY OF THE SITE IS 24 MT IN TANKS AND 2.6 MT IN DRUMS. THE AREA IS SERVED BY ROAD AND IS PART OF THE DISPERSED STORAGE SYSTEM WHICH IS UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

FOURTEEN SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 14 ADDITIONAL SAM SITES HAVE BEEN IDENTIFIED WITHIN AN 18 - 30 NM RADIUS. IDENTIFIED AAA ACTIVITY IN THE NEARBY UONG BI - VAN DANH AREA INCLUDES 6 ACTIVE SITES CONSISTING OF 30 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 5 INACTIVE SITES IN THE AREA. SPARSE TO MODERATE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE APPROXIMATELY 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B63

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

SECRET

SAC LE POL STORAGE AREA

R-218/66

YJ219195
UTM COORDINATES

2057N 10708E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE, LOCATED 0.9 NM WNW OF SAC LE AND 3.1 NM NE OF HON GAI, CONTAINS 14 BURIED POL TANKS AND 5 EXCAVATIONS FOR TANKS. TOTAL ESTIMATED CAPACITY OF THE 14 TANKS IS 168 MT. THE ROAD-SERVED AREA IS PART OF THE DISPERSED STORAGE SYSTEM WHICH IS UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

FOUR SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 9 ADDITIONAL SAM SITES HAVE BEEN IDENTIFIED 18 - 30 NM DISTANT. IDENTIFIED AAA ACTIVITY IN THE SAC LE - HON GAI AREA INCLUDES 8 ACTIVE SITES CONSISTING OF 22 OCCUPIED 57MM/85MM REVETMENTS AND 22 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 3 INACTIVE SITES IN THE AREA. MODERATE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE APPROXIMATELY 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B65

SECRET

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
25X1C NO FOREIGN DISSEM

PHU DONG POL STORAGE AREA

R-218/66

WJ973288
UTM COORDINATES

2103N 10556E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS TARGET IS 1.6 NM WNW OF PHU DONG AND 5.6 NM NE OF HA NOI, ON THE EAST BANK OF THE CANAL DES RAPIDES. THE ROAD-SERVED SITE CONTAINS 35 MEDIUM BUNKERED TANKS, WITH AN ESTIMATED CAPACITY OF 420 MT, IN A SEMI-CIRCULAR PATTERN. THE TARGET AREA IS PART OF THE DISPERSED STORAGE SYSTEM UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

TWENTY SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 27 ADDITIONAL SITES HAVE BEEN IDENTIFIED WITHIN AN 18 - 30 NM RADIUS. IDENTIFIED AAA ACTIVITY WITHIN 3 NM OF THE TARGET INCLUDES 16 ACTIVE SITES CONSISTING OF 6 OCCUPIED 100MM REVETMENTS, 84 OCCUPIED 57MM/85MM REVETMENTS, AND 13 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 7 INACTIVE SITES IN THE IMMEDIATE AREA. MODERATE TO INTENSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B67

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
SECRET
NO FOREIGN DISSEM

THUAN LE POL STORAGE AREA

R-218/66

XF143133
UTM COORDINATES

1812N 10604E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE IS 0.3 NM SSE OF THUAN LE AND 0.6 NM SOUTH OF ROUTE 1A. IT CONSISTS OF 2 AREAS WITH A TOTAL OF 40 MEDIUM BURIED TANKS. THE SOUTHERNMOST AREA CONTAINS 4 ROWS OF 5 BURIED TANKS EACH, AND THE NORTHERN AREA CONTAINS 20 BURIED TANKS IN SINGLE ROWS. THE ESTIMATED CAPACITY OF THE ROAD-SERVED SITE IS 480 MT. IT IS PART OF THE DISPERSED STORAGE SYSTEM UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

ONE SAM SITE HAS BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 4 SITES HAVE BEEN IDENTIFIED WITHIN AN 18 - 30 NM RADIUS. IDENTIFIED AAA ACTIVITY IN THE THUAN LE AREA INCLUDES 2 ACTIVE SITES CONSISTING OF 8 OCCUPIED 57MM/85MM REVETMENTS. SPARSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
X-B69
SECRET
NO FOREIGN DISSEM

SECRET

NO FOREIGN DISSEM

R-218/66

MY DUC POL STORAGE AREA

25X1A

UTM COORDINATES

1714N 10639E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE, LOCATED 3 NM WNW OF MY DUC AND 2.1 NM WEST OF ROUTE 101, CONSISTS OF 1 ROW OF 10 BUNKERED MEDIUM TANKS WITH AN ESTIMATED CAPACITY OF 120 MT. THE ROAD-SERVED SITE APPEARS TO BE NEWLY CONSTRUCTED, WITH NO OVERGROWTH. IT IS PART OF THE DISPERSED STORAGE SYSTEM WHICH IS UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

NO SAM SITES HAVE BEEN IDENTIFIED WITHIN 30 NM OF THE TARGET. IDENTIFIED AAA ACTIVITY IN THE MY DUC AREA INCLUDES 4 ACTIVE SITES CONSISTING OF 16 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 6 INACTIVE SITES IN THE AREA. SPARSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE APPROXIMATELY 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B71

NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

THANH HOA POL STORAGE AREA

R-218/66

WG829881
UTM COORDINATES

1947N 10547E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE IS ON AN ABANDONED AIRFIELD, 1.3 NM SE OF THANH HOA. IT CONTAINS 1 LARGE, 5 MEDIUM, AND 3 SMALL TANKS IN EXCAVATIONS, AND 1 MEDIUM TANK UNBURIED. ALSO APPARENT ARE 1 MEDIUM AND 3 LARGE UNOCCUPIED EXCAVATIONS. ESTIMATED CAPACITY OF THE SITE IS 118 MT IN TANKS. THE SITE IS ROAD SERVED AND IS PART OF THE DISPERSED STORAGE SYSTEM UTILIZED FOR STRATEGIC RESERVES AND/OR LOCAL CONSUMPTION.

SIX SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET, AND 10 ADDITIONAL SITES ARE WITHIN AN 18 - 30 NM RADIUS. IDENTIFIED AAA ACTIVITY IN THE THANH HOA AREA INCLUDES 15 ACTIVE SITES CONSISTING OF 34 OCCUPIED 57MM/85MM REVETMENTS AND 50 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 19 INACTIVE SITES IN THE AREA. MODERATE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE APPROXIMATELY 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B73

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

SECRET

BA DON POL STORAGE AREA

R-218/66

XE526634
UTM COORDINATES

1745N 10626E
GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS POL STORAGE FACILITY IS 0.8 NM EAST OF BA DON AND IMMEDIATELY NORTH OF ROUTE 110. IT CONTAINS 16 BUNKERED TANKS AND APPROXIMATELY 1,400 DRUMS IN THE AREA OF THE DESTROYED BA DON BARRACKS. THE ESTIMATED CAPACITY OF THE ROAD-SERVED FACILITY IS 192 MT IN TANKS AND 280 MT IN DRUMS. IT IS PART OF THE DISPERSED STORAGE SYSTEM UTILIZED FOR STRATEGIC RESERVES AND LOCAL CONSUMPTION.

NO OPERATIONAL SAM SITES ARE WITHIN A 30-NM RADIUS OF THE TARGET. IDENTIFIED AAA ACTIVITY IN THE AREA INCLUDES 28 POSITIONS CONTAINING 24 OCCUPIED 37MM REVETMENTS AND 4 OCCUPIED 57MM/85MM REVETMENTS. IN ADDITION, THERE ARE 23 INACTIVE AAA SITES IN THE AREA.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY COULD BE ACCOMPLISHED WITHOUT SIGNIFICANT DELAY.

BOMB DAMAGE ASSESSMENT

THIS TARGET HAS BEEN STRUCK 31 TIMES SINCE 17 JULY 1966, BY BOTH USAF AND USN AIRCRAFT. ORDNANCE EXPENDED CONSISTED OF ALL TYPES.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

25X1C

X-B75

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
NO FOREIGN DISSEM

SECRET

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

PHUC LOI PETROLEUM PRODUCTS STORAGE NAVY

R-218/66

25X1A

WF786702
UTM COORDINATES

1843N 10544E

GEOGRAPHIC COORDINATES

PRE-STRIKE TARGET DESCRIPTION

THIS STORAGE SITE IS IMMEDIATELY WEST OF PHUC LOI NAVAL BASE AND APPROXIMATELY 5.2 NM NE OF VINH. IT CONTAINS 2 BUNKERS 60' X 20', EACH PROBABLY CONTAINING 6 HORIZONTAL TANKS. THE CAPACITY IS UNKNOWN. THE ROAD-SERVED SITE IS PART OF THE NAVAL BASE FACILITIES.

NO SAM SITES HAVE BEEN IDENTIFIED WITHIN SA-2 MISSILE RANGE (17.5 NM) OF THE TARGET; HOWEVER, 3 SAM SITES HAVE BEEN IDENTIFIED WITHIN 18 - 30 NM DISTANT. IDENTIFIED AAA ACTIVITY IN THE VINH AREA INCLUDES 37 ACTIVE SITES CONSISTING OF 85 OCCUPIED 57MM/85MM REVETMENTS AND 94 OCCUPIED 37MM REVETMENTS. IN ADDITION, THERE ARE 96 INACTIVE SITES IN THE AREA. MODERATE TO INTENSE HMG AND SMALL ARMS FIRE IS ANTICIPATED AGAINST AIRCRAFT.

RESTORATION OF THIS TARGET TO FULL, PRE-STRIKE CAPABILITY WOULD REQUIRE 2 - 3 WEEKS WITH MATERIALS AT THE SITE. NORTH VIETNAM IS PRESENTLY FABRICATING SMALL HORIZONTAL TANKS, BUT MUST IMPORT THE VARIOUS COMPONENT PARTS. RELIANCE ON IMPORTED MATERIALS IS EXPECTED TO CONTINUE INDEFINITELY.

PREPARED BY DEFENSE INTELLIGENCE AGENCY

X-B77

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8 R-218/66
 NO FOREIGN DISSEM

SECRET

ANNEX II

25X1A

REF No

Installation Name	Capacity	
	MT Water	MT POL
Viet Tri Petroleum Products Storage	1,670	1,400
Phuc Yen Airfield POL Storage Area	4,200	3,530
Phuc Yen Petroleum Products Storage NNE UG	11,800	9,910
Ha Noi Petroleum Products Storage Thanh Am	36,453	30,620
Nguyen Khe Petroleum Products Storage	8,925	7,500
Bac Giang Petroleum Products Storage	2,330	1,960
Nam Dinh Petroleum Products Storage	13,120	11,021
Hai Phong Petroleum Products Storage	48,348	40,812
Duong Nham Petroleum Products Storage UG	4,920	4,133
Do Son Petroleum Storage	3,400	2,856
Phu Van POL Storage	1,000	840
Vinh Petroleum Products Storage	14,325	12,033
Phu Qui Petroleum Products Storage	9,000	7,560
Ha Noi/Gia Lam Airfield POL Storage Area	850	714
Thai Nguyen Petroleum Products PUG South	2,359	1,981
Van Lung Petroleum Products Storage UG	352	295
Van Lung Petroleum Products Storage West UG	84	71
Hoang Mai POL Storage Area	300	252
Ha Noi Petroleum Products Thi Cam	468	393
Bai Thuong Petroleum Products Storage UG Southeast	2,040	1,714
Son La Petroleum Products Storage	384	323
Thuong Thon Petroleum Products Storage UG	456	383
Ngoc Son Petroleum Products Storage PUG	348	292
Thai Lai Petroleum Products Storage	120	101
Yen Hau Petroleum Products Storage PUG	360	302
Thanh Lang Petroleum Products Storage PUG	1,044	877
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 1)	516	433
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 2)	120	101
Bang So Petroleum Products Storage PUG	234	197
Son Chau Petroleum Products Storage PUG	336	282
Kep Petroleum Products Storage	2,140	1,797
Ha Noi Petroleum Products Storage Duc Noi (Area 1)	1,108	931
Ha Noi Petroleum Products Storage Duc Noi (Area 2)	451	379
Ha Noi Petroleum Products Storage Duc Noi (Area 3)	300	252
Ha Noi Petroleum Products Storage Duc Noi (Area 4)	72	60

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8
 NO FOREIGN DISSEM

SECRET

25X1C

ANNEX II (Continued)

25X1A

	<u>Installation Name</u>	<u>Capacity</u>	
		<u>MT Water</u>	<u>MT POL</u>
	Cu Van Petroleum Products Storage	1,128	948
	Cu Van Petroleum Products Storage East UG	540	454
	Dao Quan Petroleum Products Storage East	444	373
	Dao Quan Petroleum Products Storage West	360	302
	Nam Dinh Petroleum Products Storage PUG	264	222
	Tung Tu Petroleum Products Storage UG	1,320	1,109
	Phuc Yen Airfield POL Storage Area 1	240	202
	Phuc Yen Airfield POL Storage Area 2	240	202
	Xom Duong Quan Petroleum Products Storage UG East	72	60
	Xom Duong Quan Petroleum Products Storage UG	72	60
	Nui Tap Tinh POL Storage Area	26.6	22.3
	Sac Le POL Storage Area	168	141
	Phu Dong POL Storage Area	420	352
	Thuan Le POL Storage Area	480	403
	My Duc POL Storage Area	120	100
25X1A	Thanh Hoa POL Storage Area	118	99
	Ba Don POL Storage Area	472	396
	Phuc Loi Petroleum Products Storage Navy	Unknown	Unknown

25X1C

SECRET

R-218/66

INDEX

<u>Installation Name</u>	<u>Geographic Coordinates</u>	<u>Page Nos.</u>
Xom Duong Quan Petroleum Products Storage UG	1752N 10550E	B61, B62, X-B61
Xom Duong Quan Petroleum Products Storage UG East	1752N 10552E	B59, B60, X-B59
My Duc POL Storage Area	1714N 10639E	B71, B72, X-B71
Ba Don POL Storage Area	1745N 10626E	B75, B76, X-B75
Thanh Thuy POL Tanks	1747N 10615E	D9, D10
Ngoc Son Petroleum Products Storage PUG	1832N 10542E	B17, B18, X-B17
Vinh Petroleum Products Storage	1840N 10543E	A23, A24, X-A23
Phuc Loi Petroleum Products Storage Navy	1843N 10544E	B77, B78, X-B77
Ky Tran POL Storage Area	1847N 10540E	C1, C2
Phu Van POL Storage Area	1851N 10519E	A21, A22, X-A21
Nho Lam POL Drum Transshipment Area	1856N 10535E	D13, D14
Ky Anh POL Drum Storage	1840N 10618E	C3, C4
Thuan Le POL Storage Area	1812N 10604E	B69, B70, X-B69
Yen Hau Petroleum Products Storage PUG	1908N 10534E	B21, B22, X-B21
Phu Qui Petroleum Products Storage	1913N 10521E	A25, A26, X-A25
Son Chau Petroleum Products Storage PUG	1918N 10543E	B31, B32, X-B31
Thanh Hoa POL Storage Area	1947N 10547E	B73, B74, X-B73
Thanh Hoa POL Distribution Area	1950N 10546E	C7, C8
Bai Thuong Petroleum Products Storage UG Southeast	1951N 10525E	B11, B12, X-B11
Thuong Thon Petroleum Products Storage UG	2047N 10540E	B15, B16, X-B15
Bang So Petroleum Products Storage PUG	2053N 10553E	B29, B30, X-B29
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 1)	2057N 10548E	B25, B26, X-B25
Ha Noi Petroleum Products Storage UG Thanh Liet (Area 2)	2058N 10548E	B27, B28, X-B27
Nam Dinh Petroleum Products Storage	2024N 10610E	A13, A14, X-A13
Nam Dinh Petroleum Products Storage PUG	2026N 10613E	B51, B52, X-B51
Do Son Petroleum Storage	2042N 10647E	A19, A20, X-A19
Hai Phong Petroleum Products Storage	2052N 10639E	A15, A16, X-A15
Thai Lai Petroleum Products Storage	2055N 10637E	B19, B20, X-B19
Thanh Lang Petroleum Products Storage PUG	2058N 10636E	B23, B24, X-B23
Hon Gai POL Drum Storage	2056N 10705E	C5, C6
Sac Le POL Storage Area	2057N 10708E	B65, B66, X-B65
Sac Le POL Tanks	2058N 10709E	D17, D18
Son La Petroleum Products Storage	2117N 10356E	B13, B14, X-B13
Ha Noi Petroleum Products Thi Cam	2101N 10545E	B9, B10, X-B9
Ha Noi Probable POL Tank Fabrication Area 1	2101N 10549E	D3, D4
Ha Noi Probable POL Tank Fabrication Area 2	2101N 10549E	D5, D6
Hanoi/Gia Lam Airfield POL Storage Area	2102N 10553E	A27, A28, X-A27

SECRET

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

SECRET

R-218766

NO FOREIGN DISSEM

INDEX (Continued)

<u>Installation Name</u>	<u>Geographic Coordinates</u>	<u>Page Nos.</u>
Ha Noi Petroleum Products Storage Thanh Am	2103N 10553E	A7, A8, X-A7
Phu Dong POL Storage Area	2103N 10556E	B67, B68, X-B67
Thuy Phuong POL Storage Tanks	2105N 10546E	D1, D2
Ha Noi Petroleum Products Storage Duc Noi (Area 4)	2107N 10551E	B41, B42, X-B41
Ha Noi Petroleum Products Storage Duc Noi (Area 1)	2107N 10552E	B35, B36, X-B35
Ha Noi Petroleum Products Storage Duc Noi (Area 2)	2107N 10552E	B37, B38, X-B37
Ha Noi Petroleum Products Storage Duc Noi (Area 3)	2107N 10552E	B39, B40, X-B39
Nguyen Khe Petroleum Products Storage	2110N 10551E	A9, A10, X-A9
Phuc Yen Airfield POL Storage Area	2114N 10548E	A3, A4, X-A3
Phuc Yen Airfield POL Storage Area 2	2115N 10549E	B57, B58, X-B57
Phuc Yen POL Truck Dispersal Area	2115N 10550E	D15, D16
Ninh Binh (POL Tanks in Sampan)	2115N 10559E	D7, D8
Phuc Yen Airfield POL Storage Area 1	2116N 10549E	B55, B56, X-B55
Phuc Yen Airfield Petroleum Products Storage NNE UG	2116N 10550E	A5, A6, X-A5
Viet Tri Petroleum Products Storage	2117N 10526E	A1, A2, X-A1
Van Lung Petroleum Products Storage West UG	2120N 10521E	B5, B6, X-B5
Van Lung Petroleum Products Storage UG	2120N 10522E	B3, B4, X-B3
Lang Khe POL Storage Area Under Construction	2127N 10549E	D11, D12
Tung Tu Petroleum Products Storage UG	2129N 10551E	B53, B54, X-B53
Cu Van Petroleum Products Storage	2137N 10543E	B43, B44, X-B43
Cu Van Petroleum Products Storage East UG	2138N 10544E	B45, B46, X-B45
Thai Nguyen Petroleum Products PUG South	2139N 10550E	B1, B2, X-B1
Duong Nham Petroleum Products Storage Underground	2101N 10630E	A17, A18, X-A17
Nui Tap Tinh POL Storage Area	2103N 10648E	B63, B64, X-B63
Hoang Mai POL Storage Area	2114N 10606E	B7, B8, X-B7
Bac Giang Petroleum Products Storage	2116N 10611E	A11, A12, X-A11
Kep Petroleum Products Storage	2123N 10618E	B33, B34, X-B33
Dao Quan Petroleum Products Storage West	2125N 10611E	B49, B50, X-B49
Dao Quan Petroleum Products Storage East	2126N 10612E	B47, B48, X-B47

25X1C

Approved For Release 2002/07/02 : CIA-RDP78B04560A005500010028-8

NO FOREIGN DISSEM

SECRET